Quantum Plus H.264 – Installation and User manual (FSK)

User and programming manual for Vista's Quantum Plus range of DVR. Models including FSK telemetry

Including:

QP04-XXXhf
QP08-XXXhf
QP16-XXXhf

(XXX – denotes hard drive size)

CE INFORMATION

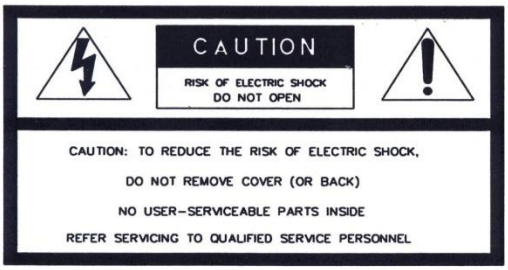
The product must be installed according to the currently valid installation regulations for EMC to guarantee the designed use and to prevent EMC problems.

The device supplied with this manual is according to the EC, EMC Directive, 89/336/EEC & LVD 73/23/EEC

Standard used for showing compliance with the essential requirements of the device:
EN 55022
EN 61000-3-2
EN 61000-3-3
EN 50130-4
EN 55024
LVD: EN60950-1

ELECTRICAL SAFETY

Explanation of electrical safety symbols


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance.

Contents

SAFETY PRECAUTIONS **6**
CONTENTS OF PACKAGING **7**
FEATURES **8**
FRONT PANEL **9**
REAR PANEL CONNECTIONS **12**
SYSTEM CONNECTION DIAGRAM **13**
ALARM CONNECTIONS **13**
REMOTE CONTROL **14**
OSD DESCRIPTION **15**
MENU TREES **16**
Display Menu *16*
Recording menu *17*
System Menu *18*
Network menu *19*
Event menu *20*
Search Menu *21*
Archive menu *22*
Log menu *22*
DEFAULT PASSWORDS **23**
MENU NAVIGATION **24**
MENU SETTINGS **26**
1. DISPLAY *26*
2. RECORDING *32*
3. SYSTEM *44*
4. NETWORK *60*
5. EVENT *65*
SEARCHING VIDEO FOOTAGE **69**
1. Date / Time Search *69*
2. Event Search and Multiple Event archiving *69*
3. Calendar Search *71*
4. Bookmark Search *72*
ARCHIVING EVIDENCE TO DVD/CD OR USB **74**
QUICK ARCHIVE **76**
DIRECT PLAY BACK ARCHIVE **77**
MULTIPLE EVENT ARCHIVING **78**
LOG **78**
CLIENT VIEWER SOFTWARE – QT PLAYER **79**
Logging on *80*
Explanation of Screen Buttons *81*
Live Monitoring *82*
Remote search *85*
ARCHIVE *87*

Remote Log *90*
Info *90*
Remote Setup: (Menu settings - Same as DVR) *91*
Display *91*
Recording *95*
System *102*
Event *111*
Local Search (viewing downloaded footage) *113*
Local Setup *117*
PAN, TILT, Zoom, Focus (Remote telemetry control) *118*
Quit (Exiting Client program) *119*

APPENDIX 1 120

ALARM SENSOR INSTALLATION *120*

APPENDIX 2 123

SETTING INTERNET SECURITY SETUP FOR WEB CLIENT ON *123*
WINDOW XP/2000 & WINDOW VISTA SERVICE PACK 2. ..... *123*

APPENDIX 3 127

DYNAMIC IP (Supporting DDNS Server) *127*

APPENDIX 4 130

SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER *130*

APPENDIX 5 132

MAKING A PARTITION ON AN EXTERNAL USB HARD DRIVE *132*

SAFETY PRECAUTIONS

CAUTION BEFORE USE

Please read this manual before installing or using the Vista Quantum DVR.

Please keep this manual in a safe place, to allow for future reference

For the safety and proper use, The DVR is marked with various symbols. Please read these to prevent injury of financial loss.

INSTALLATION SITE

Ensure installation position is level, secure and adequately ventilated.

Avoid installing close to sources of humidity or water.

CONTENTS OF PACKAGING

User Manual

Power Cable

Remote Controller

Battery

USB2.0 Mouse

Installation CD

FEATURES

● Convenience

- User-friendly GUI (Graphical User Interface)
- Easy-to-use menu structure
- Easy-to-use recorded data search (Time, Date, Motion, and Alarm)
- Easy-to control via Front Panel, IR remote control and USB 2.0 mouse.

● Stability

- Auto restart after power interruption
- DB structure offers data stabilisation and better storage utilisation

● Expandability

- Remote DVR's can be controlled using the supplied software client viewer.

● Technology

-Embedded LINUX OS

-Maximum record rate 400 fps

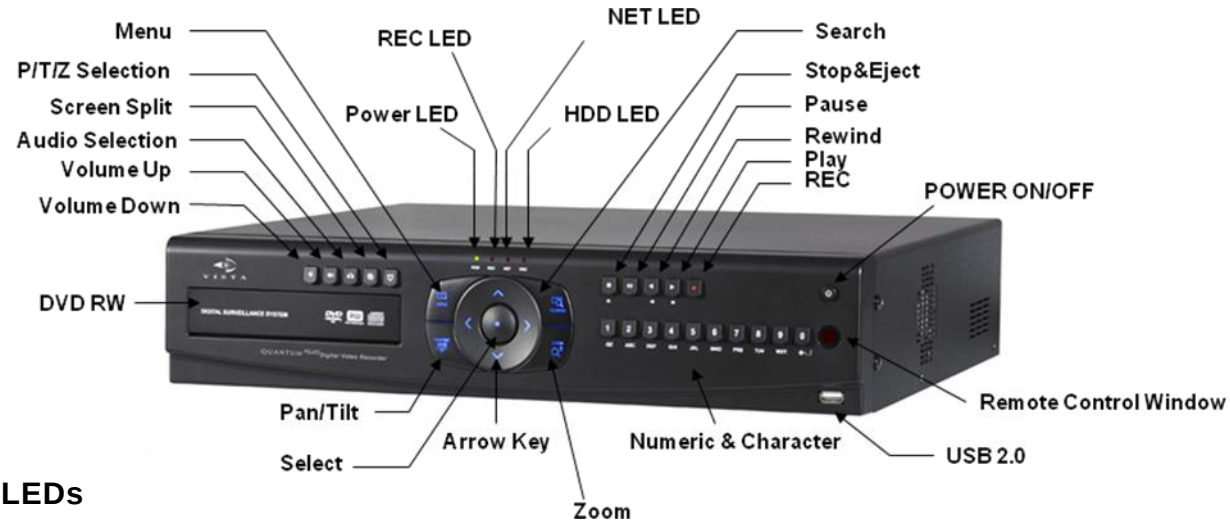
-High-resolution & high-quality H.264 algorithm

-Uses watermarking & scrambling technologies,

● Functionality

- Variable recording function (normal, alarm, motion, schedule, audio, Time Lapse,)
- FSK (Up the coax) and RS485 Telemetry
- Full channel real-time monitoring
- Live monitoring, recording, playback, backup, remote access simultaneously
- Multi channel playback
- Variable events notification to e-mail, buzzer or PC Client system

FRONT PANEL



LEDs

- REC: Recording status (When recording is on, the red light will flash)
- POWER: System Power On/Off (When power is on, the green light will be illuminated)
- NET: Network status (When network is connected, the light will lash)
- HDD: HDD status (When the system is reading or writing to the HDD, the light will flash)

USB 2.0 Port

- USB2.0 connector, for downloading to USB pens / drives (plus upgrading firmware)

POWER Button

- System Power On/Off

Numeric & Character

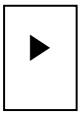
- Used for individual camera selection and selection of numbers & letters within the setup menus and searches

MENU

- Displays the menu on the screen

SEARCH

- Entering search mode



PLAY ()

- Playback of the recorded data

- When in play mode press again to enter fast forward mode.

Reverse PLAY (◀)

- Reverse play of recorded data

- When in play mode press again to enter fast rewind mode.

PAUSE (❙❙)

- To freeze picture on playback mode and live mode.

STOP / EJECT (■)

- To stop playback and go back to live mode.

- To eject DVD-RW, note: when pressed there is a 10 second delay till the eject button will operate again

REC (●)

- It starts & stop manual recording, password protected.

Volume Up & Down (/)

- To increase or decrease the volume.

Arrow Buttons

- Moves the cursor while in menu mode

SELECT (Central circular button)

- Menu selection

PTZ Selection

- PTZ Channel selection

Screen Split

- Selection of multi screen functions

AUDIO Selection

- Switches between audio channels

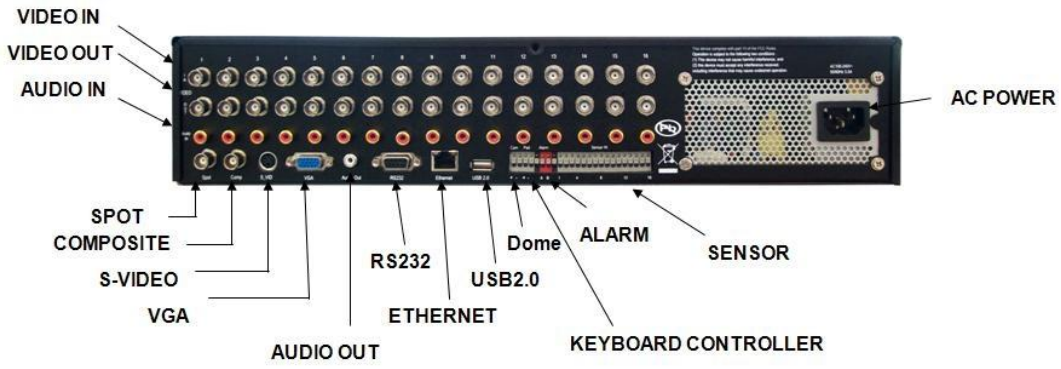
PAN / TILT

- To control P/T/Z, press this button to browse virtual key on screen.

ZOOM

- ZOOM P/T/Z camera in and out

REAR PANEL CONNECTIONS



VIDEO IN (BNC)

- 16/8/4 Camera input (1.0v p-p, 75Ω)

VIDEO OUT

- 16/8/4 LOOP / SPOT / Composite / S-VIDEO / VGA

LINE AUDIO INPUT

- 16/8/4 Audio input through line

AUDIO OUTPUT

- 1 Audio output

RS232

- 1 Serial Communication

Network Port (RJ-45)

- Connecting to the Quantum DVR through Internet or LAN

USB 2.0

-USB 2.0 connector for mouse control.

ALARM / SENSOR

- ALARM / 16/8/4 SENSOR INPUT / 1 OUTPUT PORT

CAMERA / KEYBOARD CONTROLLER

- 1 Serial Communication for Pan / Tilt Camera

- 1 Serial Communication for P/T/Z Control Keyboard

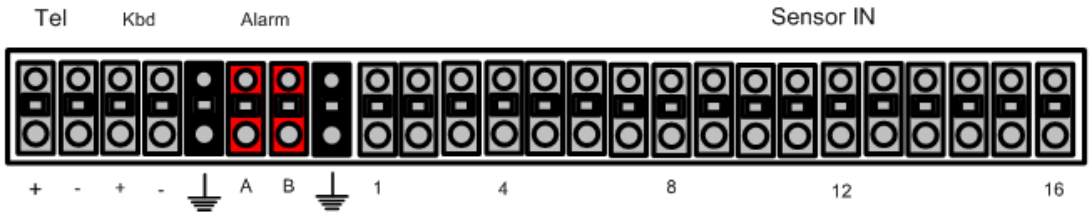
AC POWER

- AC 110~240 V

SYSTEM CONNECTION DIAGRAM

ALARM CONNECTIONS

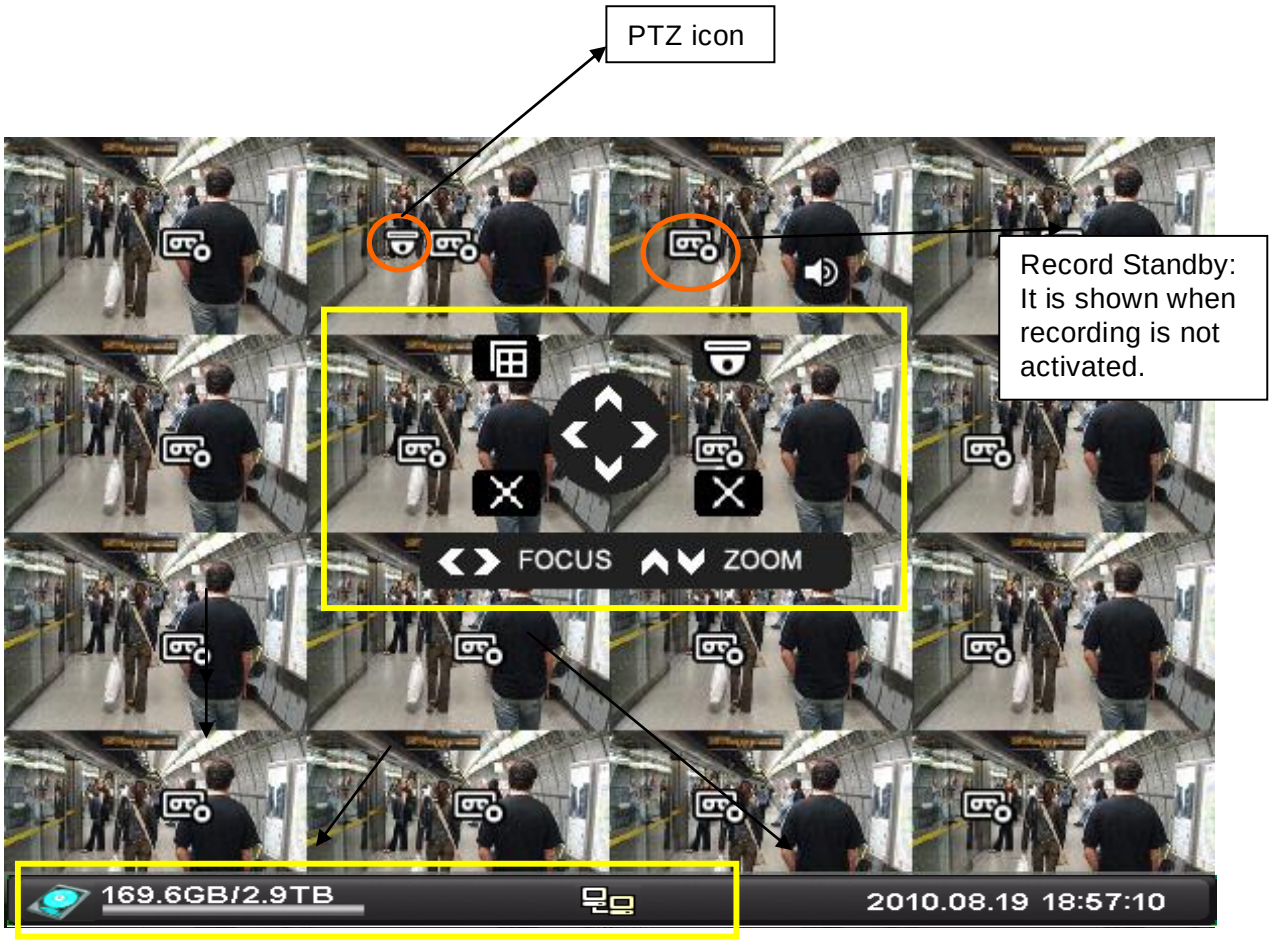
The Alarm connections are made via the push in connectors on the rear on the unit. There are 16 individual alarms inputs marked as Sensor In (1-16) and 2 Outputs marked as Alarm, plus 2 ground connections. As shown below:



REMOTE CONTROL

1. Power: Power ON/OFF
2. PTZ: Not used
3. Rec: Start & Stop Recording
4. ⓪~⑨: Camera selection and titling
5. INFO: Direct access system Info.
6. ID: use for selecting DVR IR address
7. AUDIO: Audio channel switching
8. SEARCH: Entering search
9. MUTE: Audio Mute
10. MENU: Entering system menu
11. ARROW & SPLIT: Menu navigation or split screen selection keys
12. SEL: Enter key in menus
13. VOL"+,-": Up, down volume
14. CH "+,-": Up, down channel(s)
15. ■: Stopping playback
16 ❚❚ : Pause
17. ▸(▸): Play(or fast forward)
18. ◂ (◂): Reverse play
19. LOG: Direct access Log list
20. SEQ: Hot key Spot SEQ
21. OSD: Operating OSD ON/OFF
22. DIS: Channel Division
23. Z/F: Zoom/& Focus
24. P/T: Pan & Tilt
25. Cam: camera selection for PTZ control

OSD DESCRIPTION



The Status Bar shows HDD capacity, Network connection, Time, etc using by icons.

-HDD capacity : 1.7GB is used out of 298.0GB

-Network connection : It is shown that admin or user is connected.

-Date/Time

*Others :

-Backup

-Mute

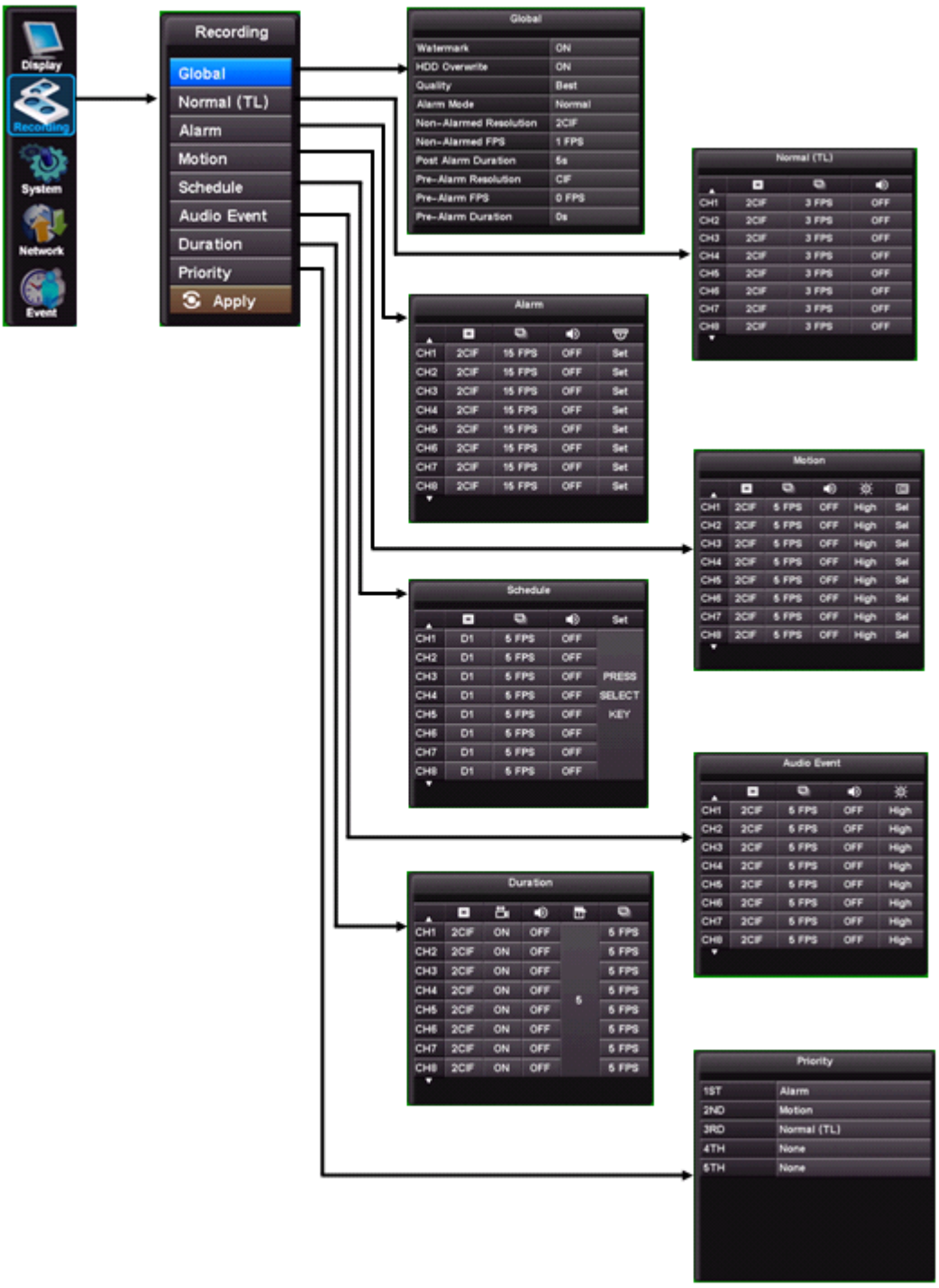
-USB Stick:

This screen shows PTZ control of camera 2. The on screen arrows will allow control of this camera.

MENU TREES

Display Menu

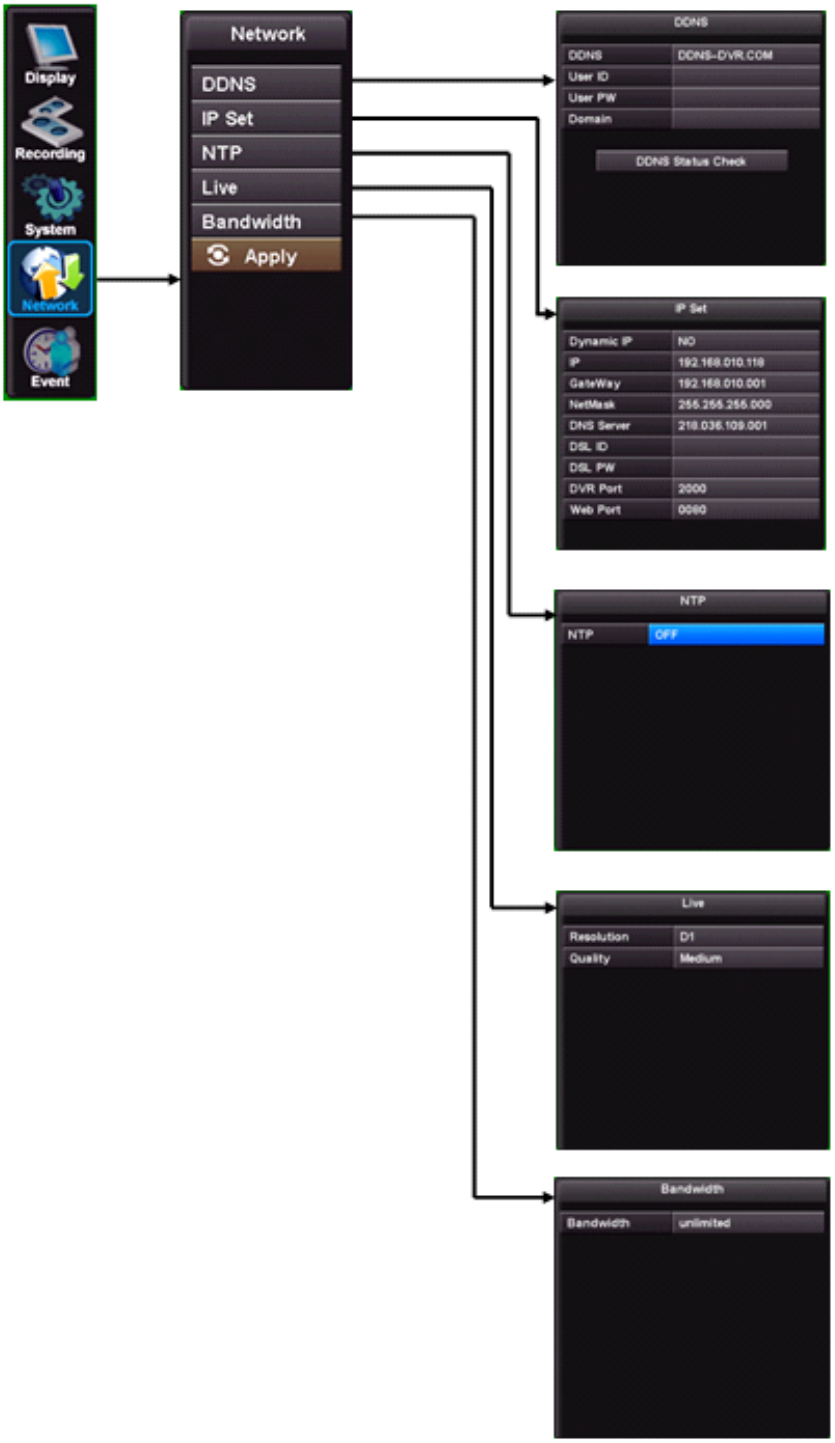
Recording menu



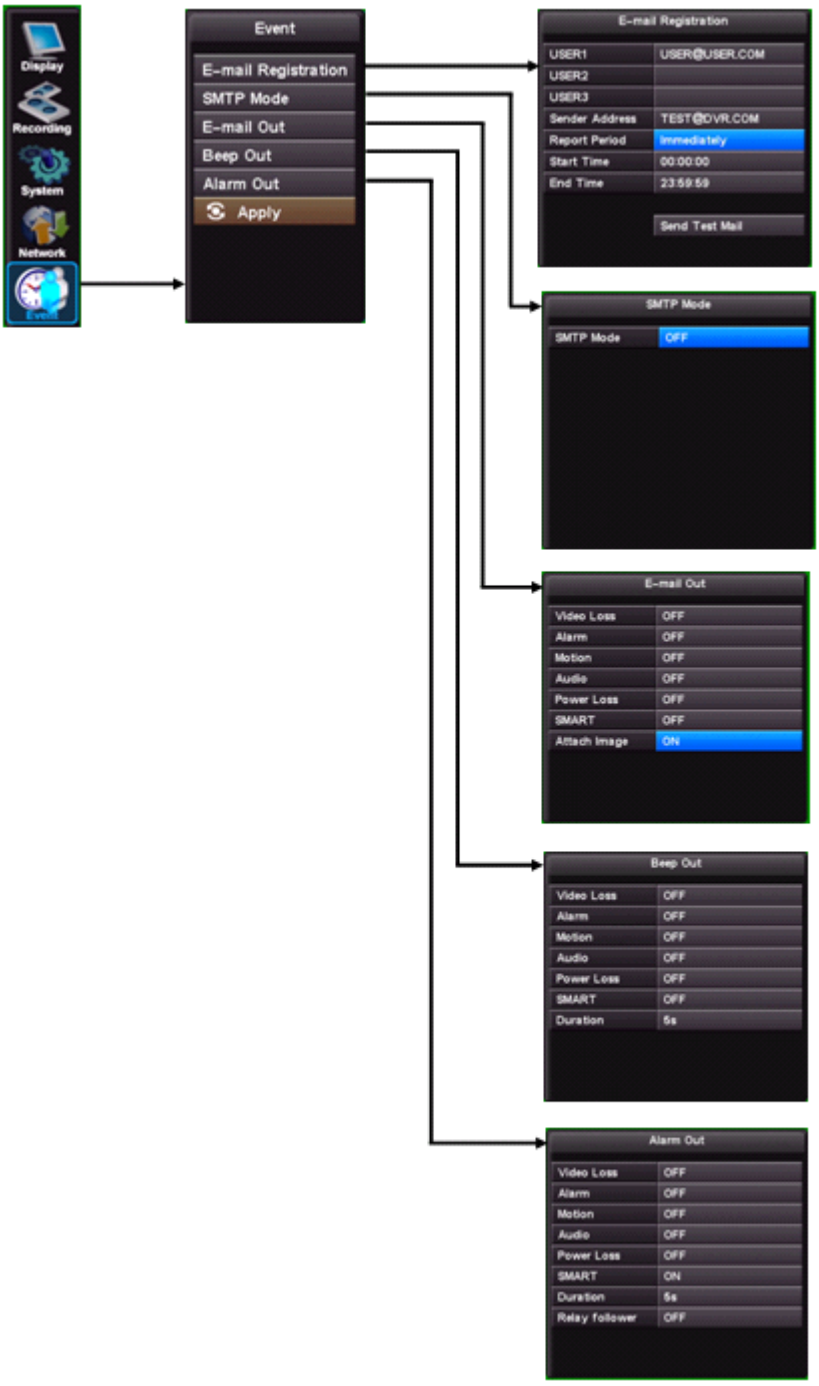
System Menu

Display
Recordir
System
Networl
Event
System
Basic
Disk
Account
Program Update
Sensor
PTZ Setup
PTZ Controller
Etc.
Apply
Basic
Language ENGLISH
Auto Delete Mode None
Date Format yyyy-mm-dd
Time/DST Set 2010-09-13 20:58:18
Video Type NTSC
System ID 03
Initialization
Information
Disk
Format OFF Execute
SMART Set Status
Account
Level Admin Activate
ID ADMIN
New PW
Confirm PW
Menu PTZ
Play/Search Network
Archive Covert
Rec Shutdown
Program Update
PROGRAM UPDATE DEVICE NOT FOUND!
PRESS 'MENU' KEY TO EXIT
OR
PRESS 'SEL' KEY TO FIND
NEW PROGRAM IN THE ODD
Sensor
Type
Sensor1 N.O
Sensor2 N.O
Sensor3 N.O
Sensor4 N.O
Sensor5 N.O
Sensor6 N.O
Sensor7 N.O
Sensor8 N.O
PTZ Setup
ID Protocol BaudRate
CH1 001 Pelco-D 9600 BPS
CH2 002 Vista PD 9600 BPS
CH3 003 Vista PD 9600 BPS
CH4 004 Vista PD 9600 BPS
CH5 005 Vista PD 9600 BPS
CH6 006 Vista PD 9600 BPS
CH7 007 Vista PD 9600 BPS
CH8 008 Vista PD 9600 BPS
PTZ Controller
ID Protocol BaudRate
001 Vista KBD 9600 BPS
Etc.
Replay Time 2 Min

Network menu



Event menu

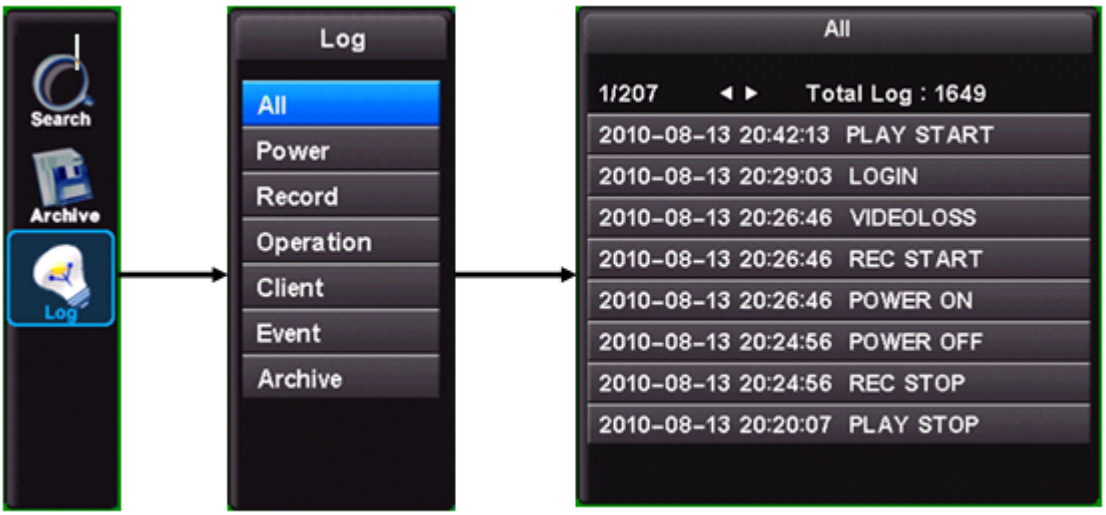

Display
Recording
System
Network
Event
Event
E-mail Registration
SMTP Mode
E-mail Out
Beep Out
Alarm Out
Apply
E-mail Registration
USER1 USER@USER.COM
USER2
USER3
Sender Address TEST@DVR.COM
Report Period Immediately
Start Time 00:00:00
End Time 23:59:59
Send Test Mail
SMTP Mode
SMTP Mode OFF
E-mail Out
Video Loss OFF
Alarm OFF
Motion OFF
Audio OFF
Power Loss OFF
SMART OFF
Attach Image ON
Beep Out
Video Loss OFF
Alarm OFF
Motion OFF
Audio OFF
Power Loss OFF
SMART OFF
Duration 5s
Alarm Out
Video Loss OFF
Alarm OFF
Motion OFF
Audio OFF
Power Loss OFF
SMART ON
Duration 5s
Relay follower OFF

Search Menu

Search
Archive
Log
Search
Date/Time
Event
Calendar
Bookmark
Date / Time Search
Select Time 2010.08.13 20:42:29
Play
Event Search
1 / 16142
10.08.13 20:42:47 ~ 10.08.13 20:42:48
CH: 6 7 11 12 13 16
10.08.13 20:42:42 ~ 10.08.13 20:42:46
CH: 6 11 16
10.08.13 20:42:37 ~ 10.08.13 20:42:41
CH: 6 7 11 12 13 16
10.08.13 20:42:22 ~ 10.08.13 20:42:36
CH: 6 11 16
Calendar Search
Year 2010
Month 8
Sun Mon Tue Wed Thu Fri Sat
Bookmark
1/1
Total : 5
2010.07.28 15:21:00 AA
2010.08.11 14:52:19 12
2010.08.11 15:07:19 YVL
2010.08.11 15:10:50 W
2010.08.11 15:51:27 WWW
Delete All

Archive menu

Log menu



DEFAULT PASSWORDS

Front Panel

A Password is required if you need to: Log on; enter the menus; down power; stop recording or changing an IP setting.

Logging ON

Before the system can be used it is necessary to Log On as a user, he rights of each user can be managed by an administrator level log on

Press MENU on the front panel, or right click and select the MENU icon. The following box will be displayed played asking for password.

The default Password is: **00000000** (8 zeros)

To select a different use press the Select key in the centre of the unit, use the up and down arrows to choose, then press the Select key again to confirm. Then enter this users password.

Viewer Software

When using the supplied Viewer software, the default logon details are:

User ID is "***admin***" (not case sensitive).
Password is "**00000000**" i.e. 8x Zero's
(Admin ID cannot be changed, as this is the full administrator ID)

Click on arrow to view a quick connection address book for the last 22 units that the software has been connected to.

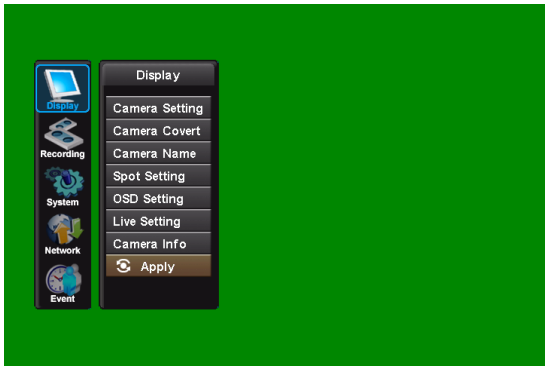
This uses the description to quickly identify each unit.

MENU Navigation

To enter the set-up menus, the user has to have the required access rights and be logged on (see page 19) press the Menu button or right click with mouse on screen and select the menu icon. The following screen will be displayed.

Front Panel or IR remote control

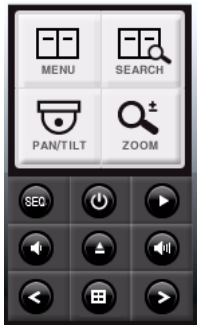
First select the user name by pressing select key and using the up and down key.
Next, enter the password (default password is 00000000 – 8 zeros). Use the numerical buttons. The following menu page will be displayed.



All menus are navigated around using the left / Right / Up / Down and the Select button.
To step back out of the menus press MENU button

Mouse control

Left clicking the mouse brings up the following display, from this right click on the menu icon to display the password box, use the mouse to select the user name and enter the password.



Note: This display is also used to select the Search modes and Telemetry modes.

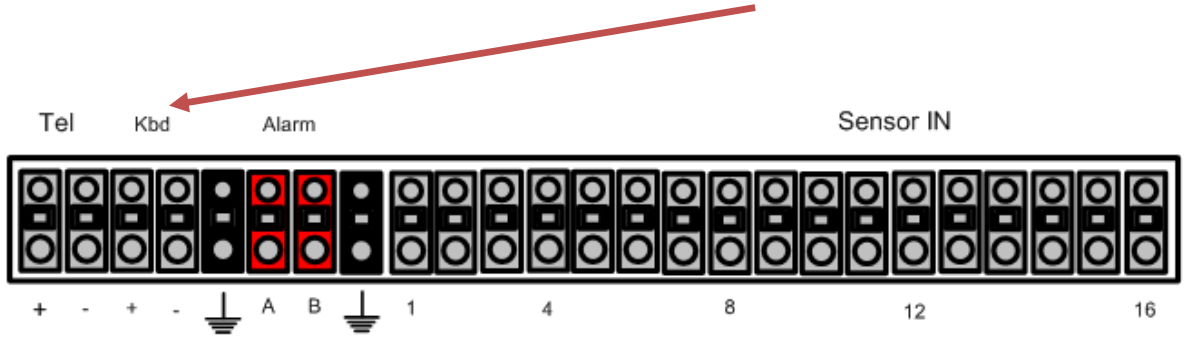
If Menu has been selected the following screen will be displayed.
Select Sub menus by clicking on the relevant title.
The method of altering t he value of a segment within a menu page will vary slightly depending on the page:

1. Clicking on a segment will toggle through available values
2. Click on icon at top of list will change all channel values
3. Click on the box and the following keyboard will be displayed:

Use the keyboard to fill in titles etc, followed by OK to enter the value.

Remote Keyboard

The remote keyboard is connected via the push in connector on the rear of the unit. The 2 connectors are marked as Kbd (+) and Kbd(-), as shown below:



MENU Settings

1. DISPLAY

1-1. Camera Setting: Brightness, Saturation, Contrast, Hue and default

The picture displayed from each camera can be individually adjusted to balance the multi screen view.
Use UP(▲) / DOWN(▼) keys to select the cell to be altered, then press select to turn the box green, then use the numeric keys to change the values.
Alternatively use the mouse to select the cell, the on screen keyboard will appear select the value and click OK

1-2. Camera Covert

Cameras can be hidden from the viewer in live or play back mode.

Select the camera to be made covert using the up and down keys, then press select to turn the camera green, toggle between on and off with the up and down buttons.
Alternatively use the mouse to select the camera and click between on and off.

In order to view covert cameras in Live or Playback, it needs to be turned off in the menus, this is requires the necessary user rights.

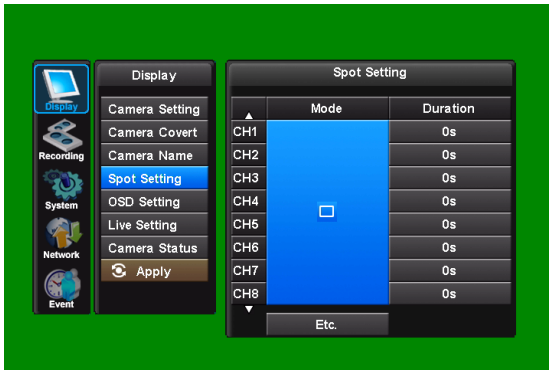
1-3. Camera Name

Each camera can be titled using the alphanumeric buttons on the front panel or the mouse. Each title can have up to 32 characters, if there are too many characters to display in 1 line, it will be shown as _... For example, 'FIRST MEETING ROOM' -> 'FIRST MEETIN…'

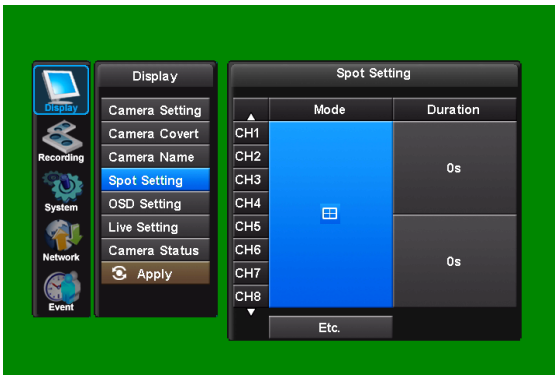
Use the Up and Down arrows to select the title to be altered, press the select key to turn the title green. Use the left and right arrows to select the character position and use the Alpha-numeric keys to select the character (Similar to SMS on a mobile phone). When complete press the select key to exit.

Alternatively use the mouse to select the title to alter, the on screen keyboard will appear, enter the title followed by the OK button.

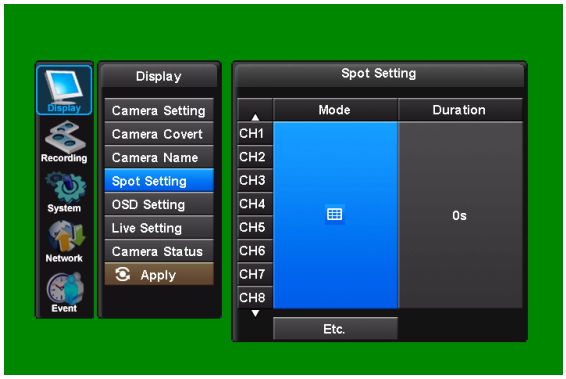
1-4. Spot Setting



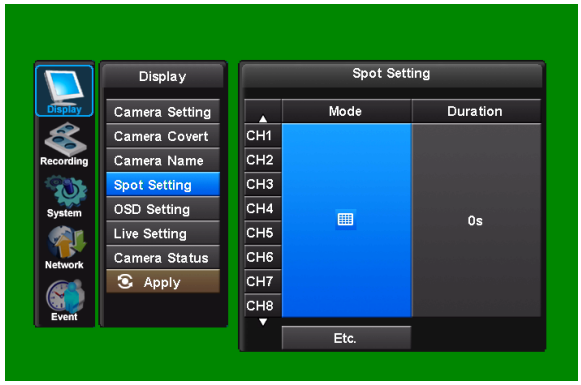
<Single Screen>



<Quad Screen>



<9 Channel Divisions>



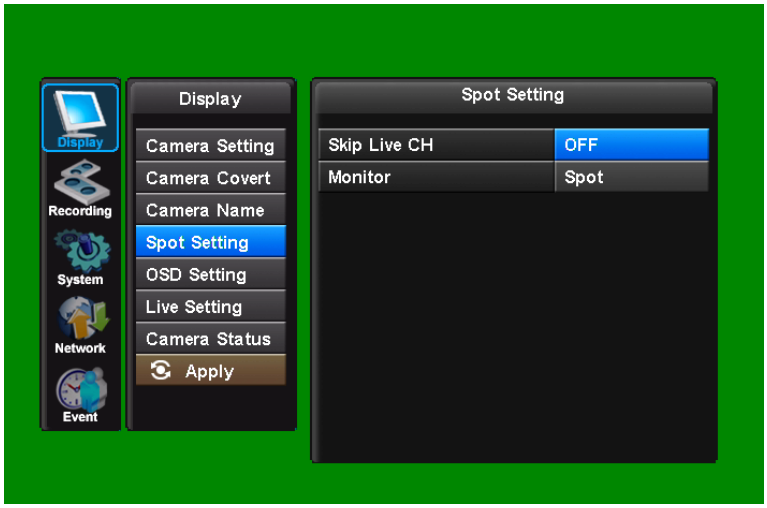
<16 Channel Divisions>

Spot output is used to configure the second monitor output. The Spot monitor can respond to Alarms, Motion, Audio, or can be configured for full or multi-screen sequences.
Use the Select key to turn the Mode box from Blue to Green, use the up and down arrows to select the mode between multi-screen options; Alarms, Motion or Audio.
Once the mode has been selected, you can select either a duration or On/Off option (Mode dependant). Use the Select button to turn the box from blue to green then use the Up and Down keys to alter value. Press select to turn back to blue.

Alternatively, use the mouse to select mode by repeatedly clicking in the Mode box. Then select the duration or On/off for each channel.

ETC (may be shown as More.)

Click on the Etc button to display the following menu page:



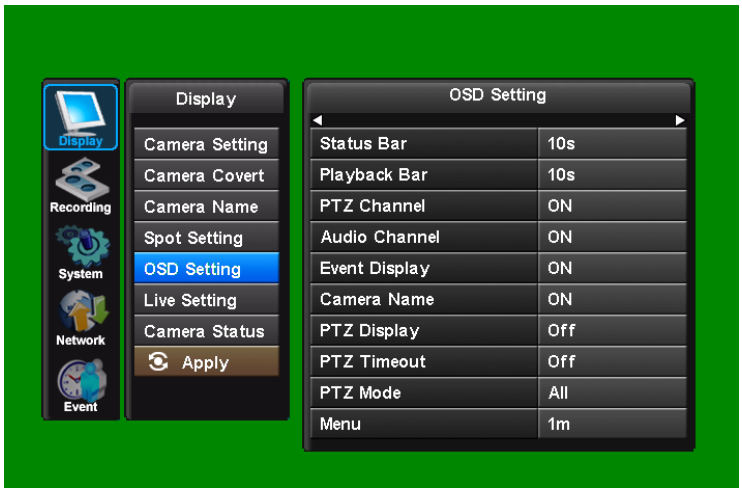
Skip Live Ch – If set to ON this will not show a live PTZ camera on the Spot Monitor output sequence.

Monitor – This defines the monitor on which any alarm events will be displayed, the options are:

LIVE – Main monitor
SPOT – Spot monitor
All – Will show on all monitors
None – The alarm will not be displayed.

1-5. OSD Setting (page 1)

On Screen Display Setting: Selecting whether the time and date etc is shown on the screen or not.



Status Bar

The display bar at the bottom of the screen can be set to be permanently on or to disappear after a period of time.

Playback bar

The mouse operated playback bar can be set to be permanently on or to disappear after a period of time.

PTZ Channel

The icon which indicated which camera has PTZ control allocated to it in a multi screen can be set to On or OFF

Audio Channel

The icon which indicated which camera has Audio control allocated to it in a multi screen can be set to On or OFF

Event Display

Icons such as recording mode, motion detection can be displays or not (On /Off)

Camera Names

The camera title can be displayed or not (On/Off)

PTZ display

When in telemetry mode the on screen telemetry display can be set to be Always on or to disappear after a set period of inactivity 5 or 10 second or Off.

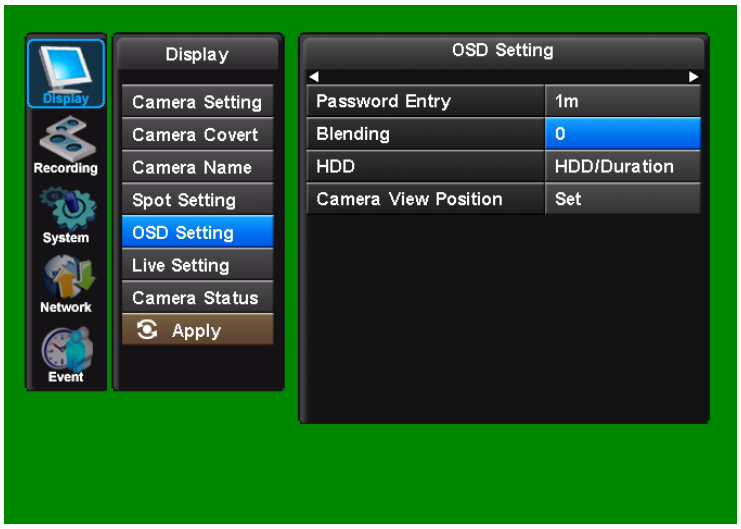
PTZ Timeout

The PTZ operation can be set to time out after a period of time.

Menu

The menu display can be set to time out after either 1 or 5 minutes.

OSD Setting (page 2), use the left and right arrows at the top of the menu page to switch between page 1 and 2.



Password Entry

The password entry display can be set to time out after 1 or 5 minutes.

Blending

The opacity of the menus and Status bar can be set between 0 and 6, 0 is solid, 6 being very opaque.

HDD

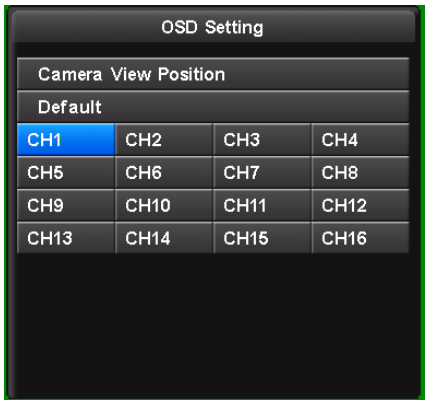
The Built in Hard Disk Drive duration calculator display can be turned on or off.
Options are:

HDD – Hard disk size displayed
Duration – The approximate time available on the disk drive is displayed
HDD / Duration – Both the Hard Disk Size and recording time available are displayed.

Camera View position

This option allows the sequence, in which the cameras are displayed on the DVRs largest multi screen option, to be tailored to the viewers requirements.

Click Set to show the following screen:



Each segment can have any camera allocated to it.

Click on default to return to the logical numbering 1-16.

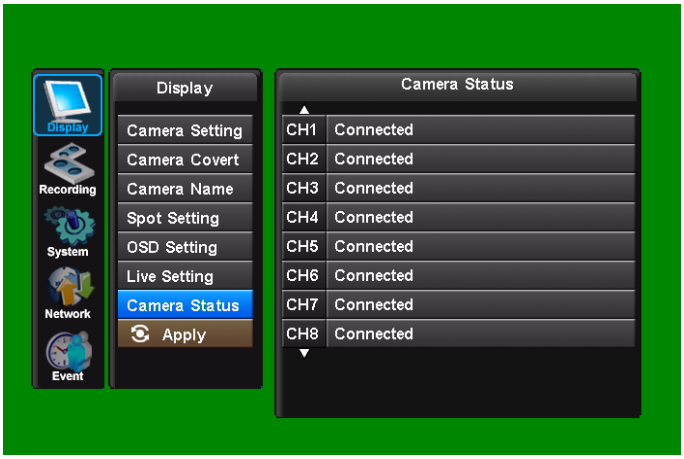
1-6. Live Setting

The live settings are used to set up a sequence of either full screen camera images or multi screen displays

Use the Up and Down arrows to select either : Full Screen, Quad or Nine way split sequences. The display will change to allow individual sequence times to be set per channel or split screen option. Use the select key to turn the cell green and then the Up and Down keys to change the values.
Use the right button to move to “Start” press select, the main monitor out put will display this sequence.

Alternatively use the mouse to select the sequence required then select the duration.
Click “Start” to turn the sequence on. To interrupt the sequence, simply select any camera.

1-7. Camera Status



Select which cameras will be connected. Any cameras not connected will not be able to have any record rates set against them in the Record set up tables.

APPLY: In order to save any modified setting value, press “SEL” key when the “APPLY” section is highlighted. This action can be carried out within each Sub Menu.

2. RECORDING

All recorded data is watermarked to ensure that it is not tampered with. Using the software supplied the legitimacy of this data can be verified.

2-1. Global

Watermarking

Generally this should be set to on, this allows the supplied software to verify the downloaded information to ensure it has not been tampered with or changed.

HDD Overwrite

Generally this should be set to on to ensure that the DVR does not stop recording when the hard drives are full.

Quality

The amount of compression applied to the recording can be changed between Best, Good and Standard.

Alarm Mode

Exclusive = Will only record the cameras in Alarm
Normal = Alarmed cameras will record at the settings in the Alarms / Motion or Audio Events record set-up pages in the RECORD section of the main menu.

Non-Alarmed Mode

Not yet operational, for use in future firmware revisions.

Non-Alarmed Resolution

This is the resolution that the unit will record the cameras that are not in alarm, during and Alarm event (Alarms / Motion or Audio) this can be set to CIF, 2CID or D1

Non-Alarmed FPS

This is the number of pictures per second that the unit will record the cameras that are not in alarm mode.

Post Alarm Duration

This is the time for which the DVR will carry on recording, in it's a alarm mode, after an alarm event has finished. It can be set up to 99 Seconds

Alarm Display Mode

This can be set to:
Full screen – Primary alarmed camera will be displayed full screen
Quad – The primary camera plus the 3 secondary cameras will be displayed in a Quad view
No change – Alarm activations will not be displayed

Alarm Display Freeze: Not yet operational, for use in future firmware revisions.

Page 2 of Recording global, click on the arrows at the top of the screen to toggle between the pages

Pre-Alarm Resolution

This is the resolution that the DVR will record its Pre- Alarm events in; it can be set to CIF, 2 CIF or D1.

Pre-Alarm FPS

This is the number of pictures per second recorded per camera during the Pre Alarm period. The maximum FPS will vary dependant on the Pre-Alarm Resolution setting.

Pre-Alarm Duration

This is the time for which the DVR will buffer recordings, to use as pre-alarm events, It can be set to 0, 5, 10, 15 or 20 seconds

Method

CBR – Constant Bit Rate (Default setting)
VBR – Variable Bit Rate (May increase picture quality but will increase files sizes, so reduce he time period being recorded onto the internal HDDs.

2-2. Normal (TL) (N1 through to N4)

This configures the continuous recording settings per channel, for scheduling purposes (see section 2.5) it is possible to configure 4 different TL modes (N1 through to N4). These are selected using the left and right arrows at the top of the page.

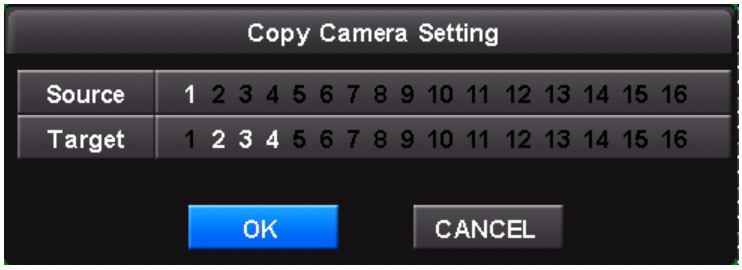
As default the DVR is set to record N1 (in schedule overview this is denoted by **0.**

For each TL mode

Record rates available:

In CIF (360x288), 25 fps is available to each channel (total 400fps).
In 2CIF (720x288), 12.5 fps is available to each channel (Total 200fps).
In D1 (720x576), 6.25 fps is available to each channel (Total 100fps).
Each camera can be individually configured for record rate and Audio on/off.

Once a single camera has had its parameters set, these can be copied to selected cameras by selecting the “Copy Camera Setting” button, the following window will be displayed:



Select the source camera and the cameras required to have the same settings then select OK.

2-3. Alarm

There are 16 Alarm inputs on the rear of the Quantum these can be used to initiate the Alarm record mode.
The Alarm recording Quality, FPS and Audio are set up in the same way as Normal Recording.

SET: This allows the camera that is to be associated to the alarm input to be allocated, along with up to 3 other cameras which can be sent a telemetry action on receipt of the alarm.

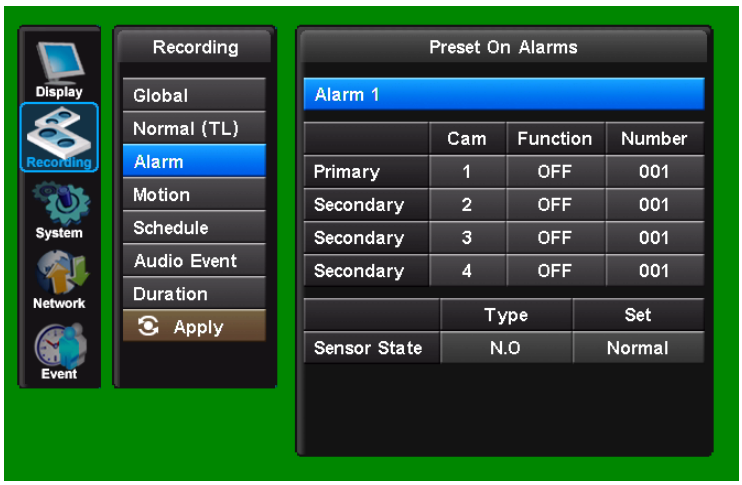
Highlight the Alarm title at the top and select the relevant alarm input number. The camera selected as the PRIMARY camera, is the one that will show in the Log and on the Calendar Search menu in the alarm coloured time bar.

Function: can be set to Preset, Tour or Learn

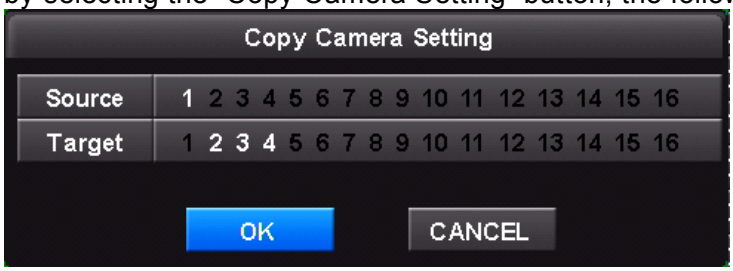
Number: can be set to the relevant Preset, Preset tour or Learn tour number.

Type: can be set to either normally open (N.O) or normally closed (N.C)

Set: Normal if the alarm is to be used, set to Off if no alarm input is required. **Do not use ON**, this will be removed in future firmware versions.

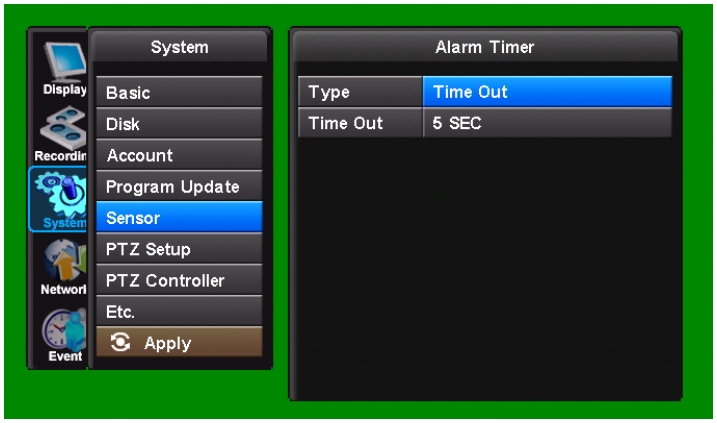


Once a single camera has had its parameters set, these can be copied to selected cameras by selecting the “Copy Camera Setting” button, the following window will be displayed:



Select the source camera and the cameras required to have the same settings then select OK.

Alarm Timer:

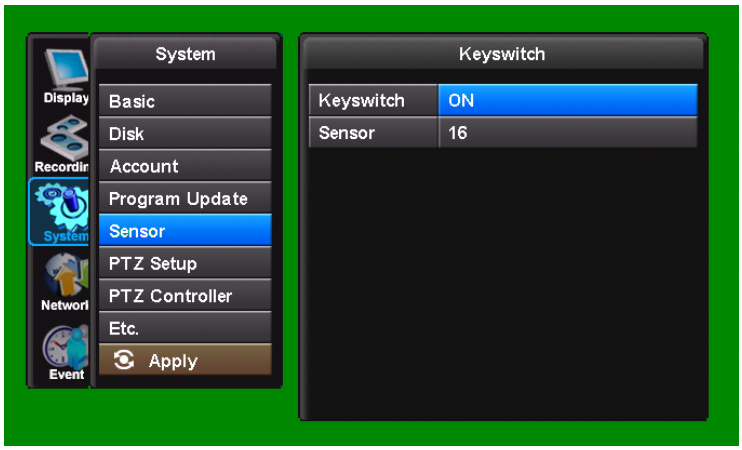


Timed out: The alarm will remain active for the period of the alarm plus the amount of time allocated.

Acknowledge: The operator needs to acknowledge the alarm by pressing the SEL key on the front of the DVR or the Alarm key on the VKBD4 keyboard.

Transparent: The alarm remains active for the period that the input is active.

Keyswitch:

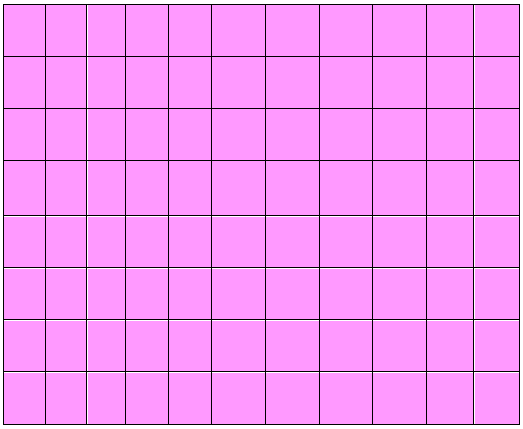


A single alarm input can be selected to be a control switch, to turn alarm on or off globally. This allows a final exit key switch to be used to manually arm the inputs.

2-4. Motion

Motion on any channel can trigger recording of that camera. Resolution, Images Per second, Audio, and Quality can all be configured individually per channel. As per Normal and Alarm Recording Modes.

To setup the motion detection grid per channel select the “SEL” button.

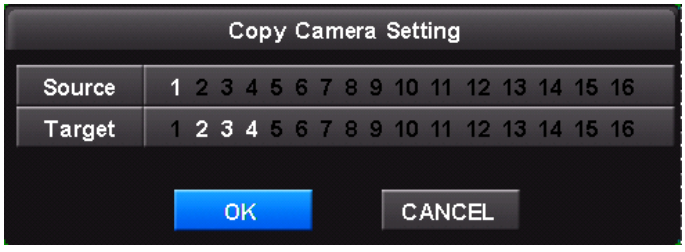


The detection area is divided into a grid of 11x8 cells. Default is all cells in active mode.
Use the Left right up down to move cursor and the Select key to toggle between active (PINK) and inactive (CLEAR).

The mouse can also be used to select cells and toggle them on and off.

Care must be taken in setting of the motion sensitivity. It is recommended that each level is tested to find out which one suits that particular camera site.
The motion detection is not recommended for external cameras.

Once a single camera has had its parameters set, these can be copied to selected cameras by selecting the “Copy Camera Setting” button, the following window will be displayed:



Select the source camera and the cameras required to have the same settings then select OK

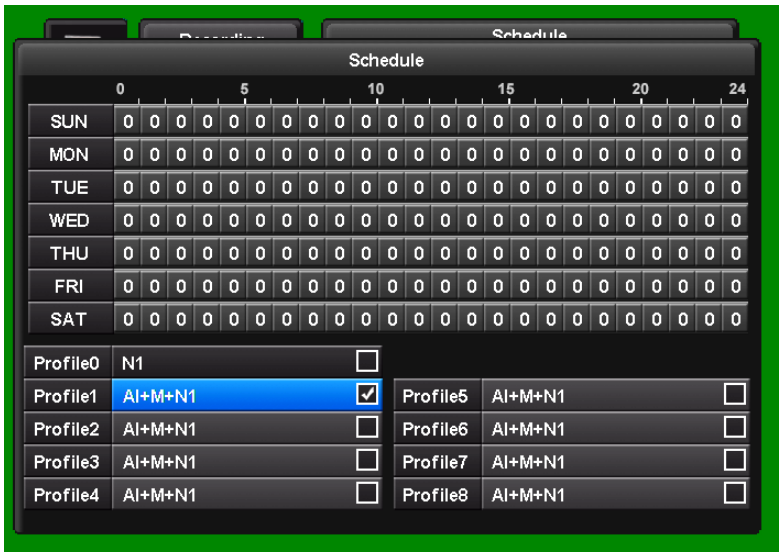
2-5. Schedule (In future firmware releases, this section will be moved down the list to the below DURATION)

The Schedule mode allows the operator to tailor the recording characteristics of the DVR to each individual hour of the week. As default the Schedule is set to record in **Profile 0** (Normal Time Lapse mode 1)

To program the schedule to each sites individual requirements, use either the front panel or more easily via the mouse.

From the mouse:

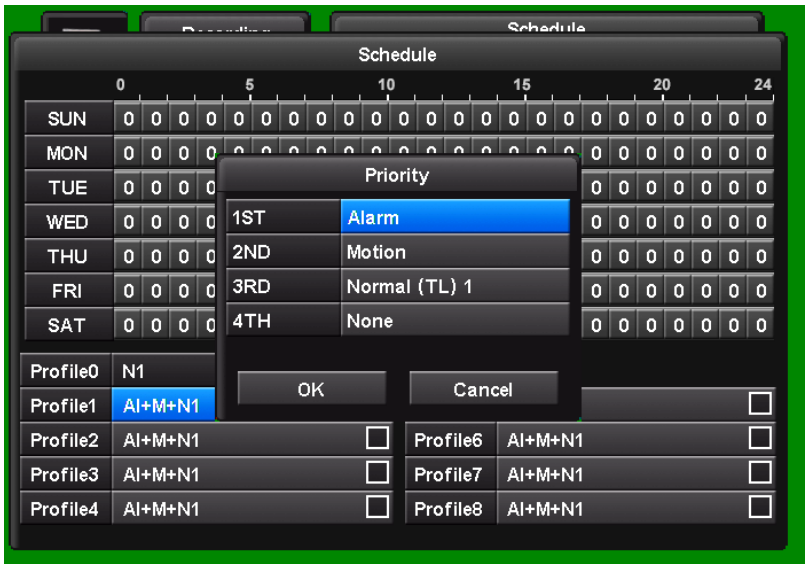
1. Left click anywhere on the schedule box, the following screen will be displayed:



AL+M+N1 = Priority settings are Alarm top Priority, Motion 2nd and Normal Time lapse1 is 3rd.

Note: **Profile 0** cannot be changed. It is always Normal Time Lapse 1 (N1).

To amend the Profiles priority settings click on the Profile list box (not the tick box) e.g. on AL+M+N1. The following screen will be displayed:



Change the priority listing to suit the schedule requirements. Each priority level can be selected to be any of the following:

Alarms, Motion, Normal Time Lapse (1 -4), Audio Event, Duration or None.

The record mode at the top of the list is the one that takes priority.

In the example above Alarms will take priority to over all else. So when an alarm input is triggered the record setting for that input will be used.

If there are no active alarm inputs, then the DVR is looking for cameras with motion in the scene, when motion is detected then the Motion Record settings will be used.

If there are no active alarm inputs and no motion is detected, the DVR will record using the Normal Time Lapse 1 settings.

Once the priority settings for all the require profiles have been set, then the timetable can be programmed for the periods during which each profile is to be used.

To select the hours of the week that each profile is to be used, click in the tick box for that profile, then click drag on period within the timetable. The Profile number will appear in the selected boxes, as shown in the next table:

Right click to confirm and exit.

Setting of the schedule profiles can be carries out using the front panel of the DVR, referring to the images in the previous section use the following key presses.

Press the SELECT key to enter the SCHEDULE set up screen.

Press the SEARCH key followed by the Up or Down arrows to select the profile number.

Press Select to display the priority settings.

Press the Up and Down arrows to select the priority number.

Press Select to change from Blue to Green

Press Up and Down to change the Priority Settings.

Press Select to return to Blue

Press the down arrow to move to OK

Press Select to confirm the changes.

Press Search to enter the time table

Press left/Right/Up/Down to navigate to required hour

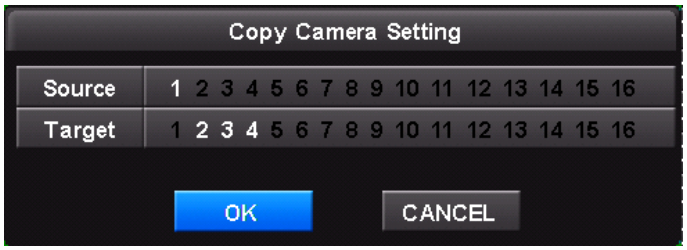
Press Select to confirm hour selection.

Press Menu to confirm and exit.

2-6. Audio Event

16 Audio Inputs and 1 Output are available. Recording can be triggered when Audio is detected. As with Normal and Alarm recording the Resolution, Images per second can be set per channel. Individual channels can be enabled or disabled and the sensitivity set to either Low, Middle or High.

Once a single camera has had its parameters set, these can be copied to selected cameras by selecting the “Copy Camera Setting” button, the following window will be displayed:

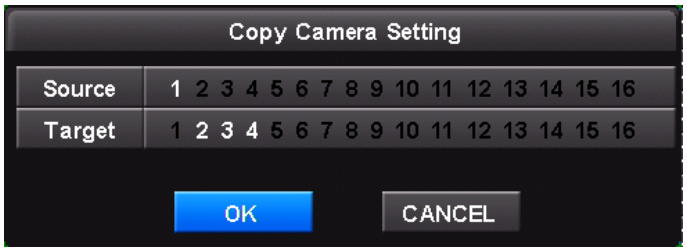


Select the source camera and the cameras required to have the same settings then select OK

2-7. Duration

The Duration mode allows the user to set the number of days that they require to record for. The resolution; whether cameras are active or not and whether audio is being recorded can each be set per channel. The user then sets the number of days of recording required, then the Quantum will automatically calculate best record rate to achieve these settings

Once a single camera has had its parameters set, these can be copied to selected cameras by selecting the “Copy Camera Setting” button, the following window will be displayed:

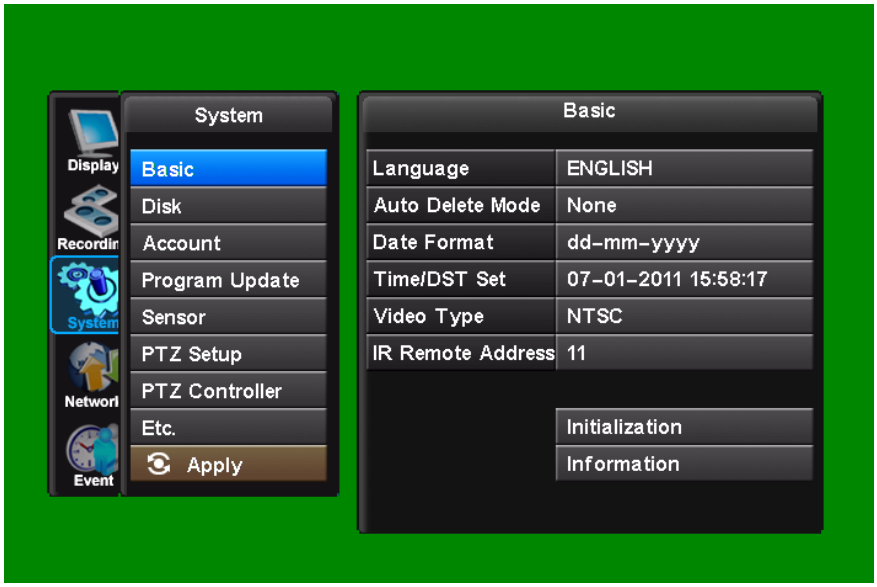


Select the source camera and the cameras required to have the same settings then select OK

3. SYSTEM

3-1. Basic

User can set Language, Auto Delete Mode, Date Format, Time/DST Set, Video Type, System ID. Also, Initialisation and system Information is available.



Language

The default is English. Italian, French, Hungarian, Slovak, German, Russian, Chinese, Dutch, Spanish, Portuguese, Japanese Danish and Polish are available.

Auto Delete Mode

Auto Delete Mode can be set to automatically erase recorded older than a certain number of days. This can be set between 0 and 99 days.

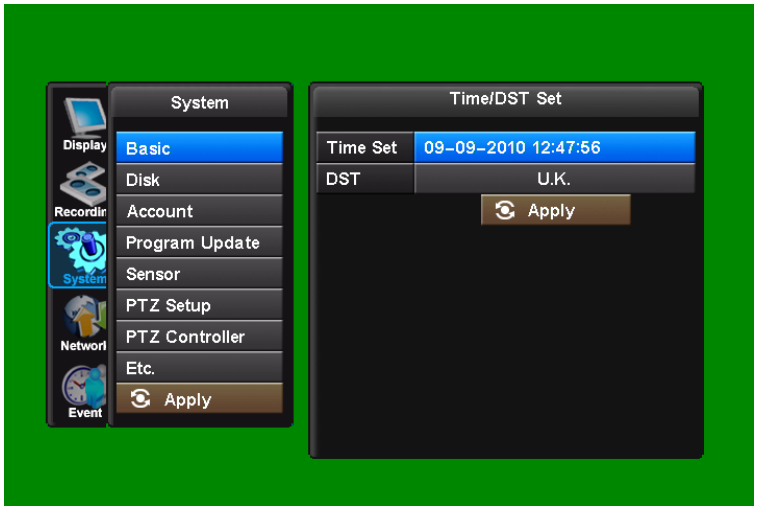
Date Format

The default is dd-mm-yyyy. Other date formats available are: mm-dd-yyyy / / yyyy-mm-dd.

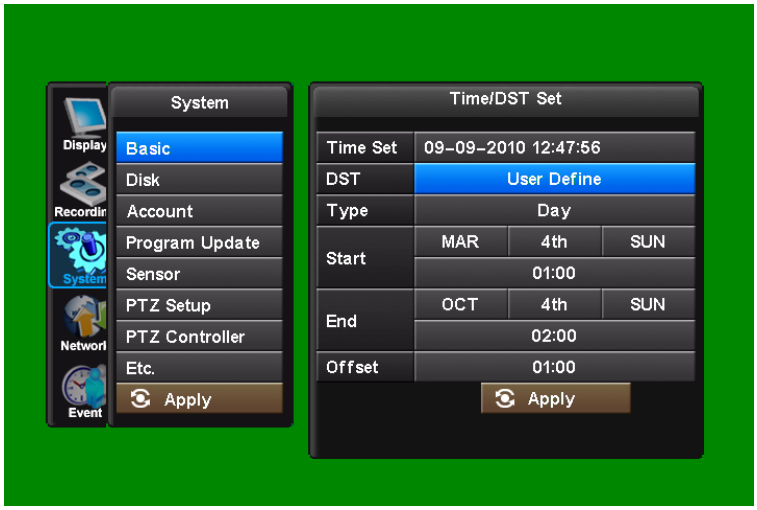
Time/DST Setting

The DVRs time can be set by clicking on the time and date displayed in this section, the on screen keyboard will appear. Set the time and date and click Ok, next select the country to enable the Day Light Saving mode.

See next page for explanation.



If the country does not appear in the list the use the User define option as shown below:



PLAYBACK FOLLOWING TIME CHANGE

The DVR uses the time and date to index video on the hard disk drive so you can find it later. Changing the time can cause the DVR to work improperly, when you try to play back video. If you set the hour ahead, this is not a problem. But, if you set the hour back, there will be more than one recording with the same time stamp.
Such as during the October Daylight Saving Time changeover, if you try to search for video between 1 am and 2 am, the recorder may not operate properly because there will be two hours of recorded video during this time period. To view video during this overlapping time period, you must start playback before 1 am, then recorder will play both hours between 1 am and 2 a.m.
You cannot do a backward search through the overlapping time. But, you can do forward search.
The Time and Date and the DST time can be changed from the front panel, the Mouse or the Remote Control

Video Type

Video Type can set in this menu without rebooting or initialisation. The default is PAL, NTSC can also be selected

IR Remote ID

The remote control can be used to control up to 16 Quantum's, the ID number on each can be set to a unique address so that the remote will only control one at a time if they are in close proximity. The default is 11.

To select a unit on the remote control press the ID button, followed by a 2 digit code (e.g. 05 for DVR 5) , followed by the ID button again. The LED will flash slowly.

Initialization

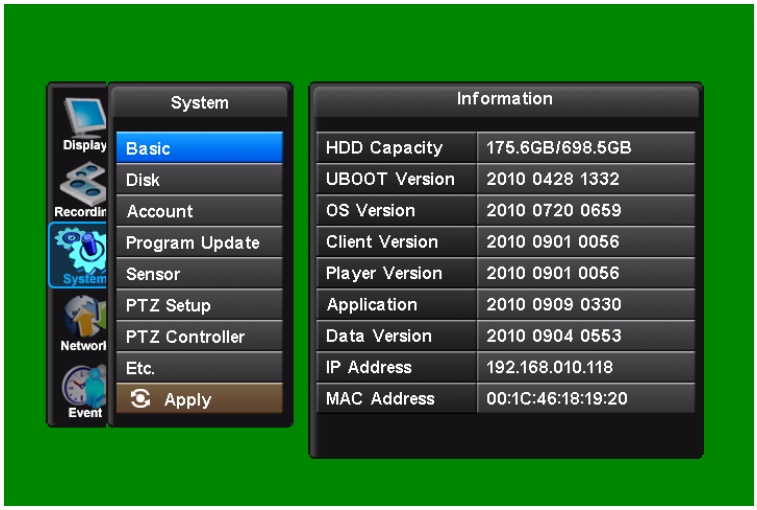
Initialization

All the menu settings will be returned to the factory default. To carry out this function the system recording will have to be turned off.

Information

Information

The Information Screen shows the hard disk size, current firmware revisions, IP address and MAC address

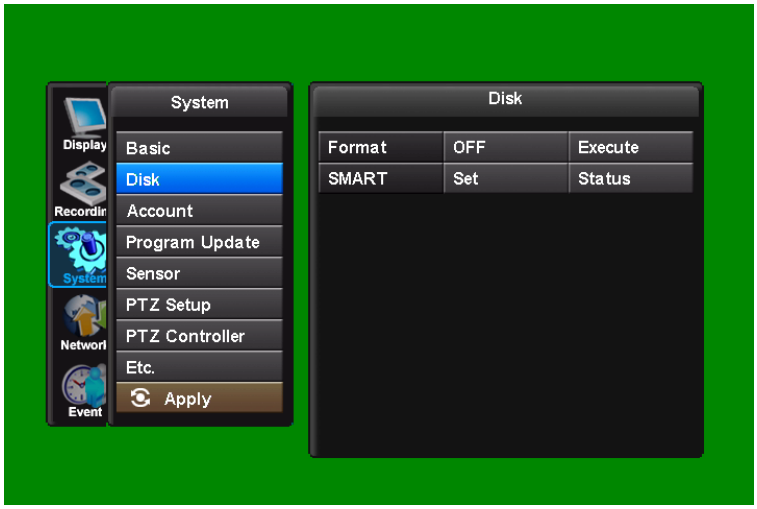


3-2. Disk

Format

Formatting of the drive is used when new drives are installed or you need to wipe all information on the disk.

Click on OFF to turn to ON, then click on Execute, click YES, to confirm



Smart

This function is used to keep a check on the health of the Hard disk. The parameters which can be monitored are:

1. Read/Write errors on the drive
2. Drive temperature.

To set enable these features, click on “Set”, three options will be presented:

Smart – Turn to on to enable feature

Temperature – Using the on screen keyboard set the temperature at which the warning is to be reported. (recommended setting 45 degrees)

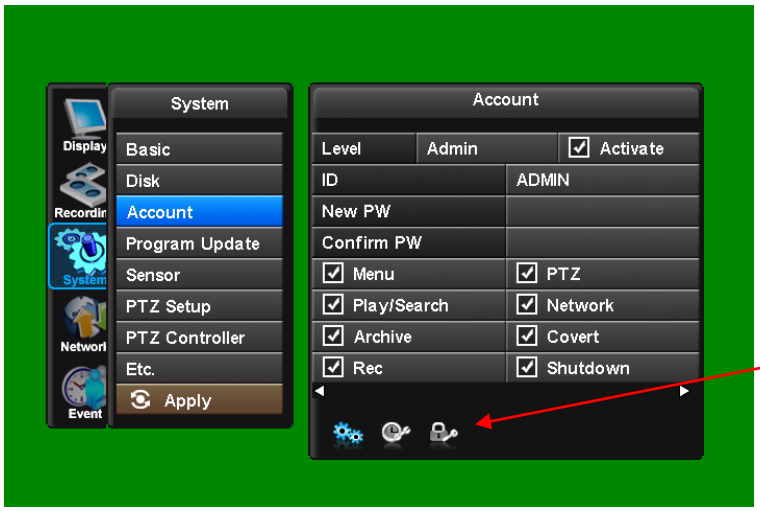
Message Box - The message box can be turned on or off to give a visible warning. Alternatively and E-mail; can be sent if any problems occur (see the Event menu set-up section on page 66)

3-3. Account

The DVR can have the following different levels of operators, each with different users rights and passwords:

Admin level –	Operators logged in at this level have full rights
Manager level –	Operators logged in that this level as default have access to all except: Stopping Recording and Shutting down the DVR.
Users 1-4 -	Operators logged in at this level Only have the ability to Search and play, Control PTZ cameras and get access via the network.

Each users rights, can be individually tailored to their own requirements, the amending of these rights can only be done by an Administrator level log on.



Icons used to select various options with in the account setup

Amending operators settings and user rights

Click on the box beside Level, this will step through the 6 Operator set up pages, chose the operator required.

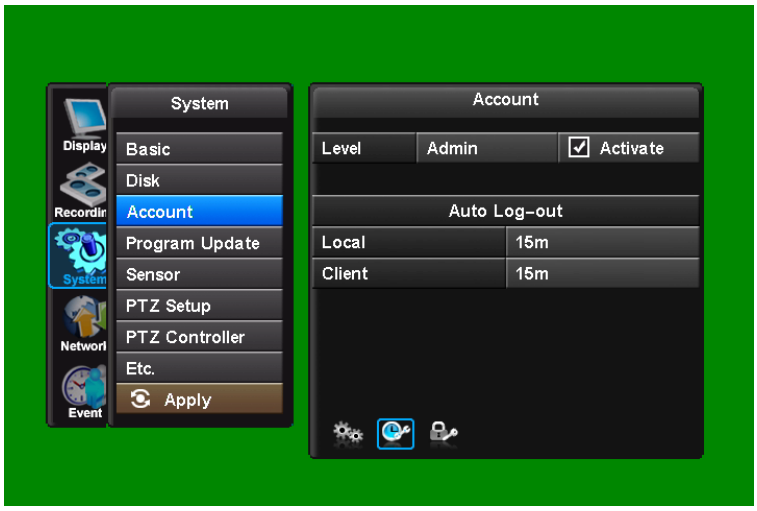
The operator ID can be changed using the on screen keyboard
The operators Password can be changed
The operators user rights can be amended:

Menu – Allows access to the menu
Play/Search – Allows access to the Playing back and Searching
Archive – Allows the ability to download information
Rec - Allows the ability to turn off recording
PTZ – Allows the ability to control PTZ cameras
Network – Allows the ability to view remotely with the client software
Covert – Allows the ability to view coverted cameras
Shutdown – Allows the ability to turn the power off from the front panel

Once the above has been set, ensure that the Activate box has been ticked.

Automatic timed log out

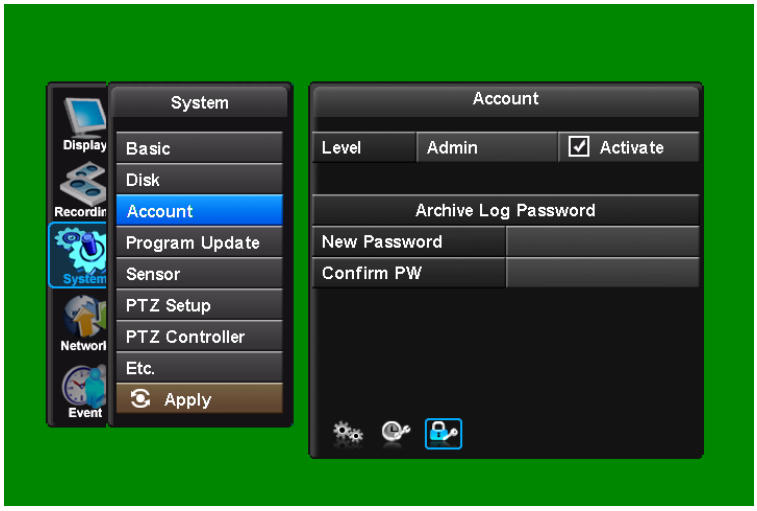
The system can be set to automatically log out a user after a certain amount of time if no key presses have been made. The operator level has to have been activated before this can be set. While in the account setup page for the User, click on the middle icon at the bottom of the menu page , the screen will change to show the following:



Click on the boxes adjacent to “Local” for the time out period for operation form the front panel. Click on the box adjacent to “Client” for the time out period for operation form the client software. This can be set to either: Off, 15 mins, 30 mins or 1 Hour.

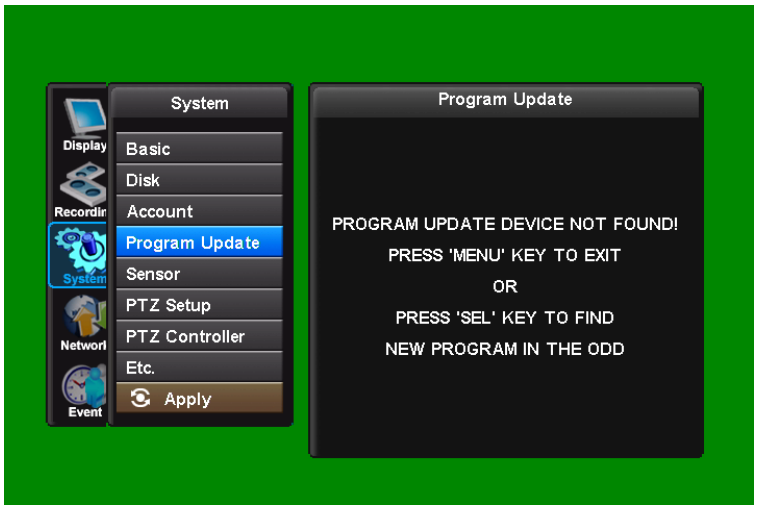
Archive log access

Access to the archive log is password protected, use this section to amend the password per user. This will allow traceability of which user has downloaded information.



3-4. Program Update

Always turn off: Recording, Playback and Network access while upgrading the unit



The latest firmware version can be upgraded through USB 2.0 Port using Memory Stick or CD/DVD Media. When a memory stick is connected to the USB port, this symbol will be shown in the status bar of the screen.

Enter “menu”-> “System Set”-> “Program Update”. If the system recognizes the new firmware then, “New program found” will be displayed on the screen.
Next press the “SELECT” button.

Processing percentage will be displayed.

NOTE

1. If the system doesn’t recognize the new firmware, “New program not found” will be displayed.

2. USB compatibility has been tested successfully with: Lexar Jumpdrive 128/256MB, Sandisk Mini Cruzer & Cruzer Micro 2GB, KINGSTONE 2GB, A-DATA 2GB, IMATION 2GB, SANDISK 1GB, SANDISK 512MB, MARUZEN 1GB

3. For system stability, please turn off 1) recording 2) playback 3) network connection during upgrading.
4. After updating program, reboot the DVR. The simplest way is press POWER button and enter the password.

3-5. PTZ Setup

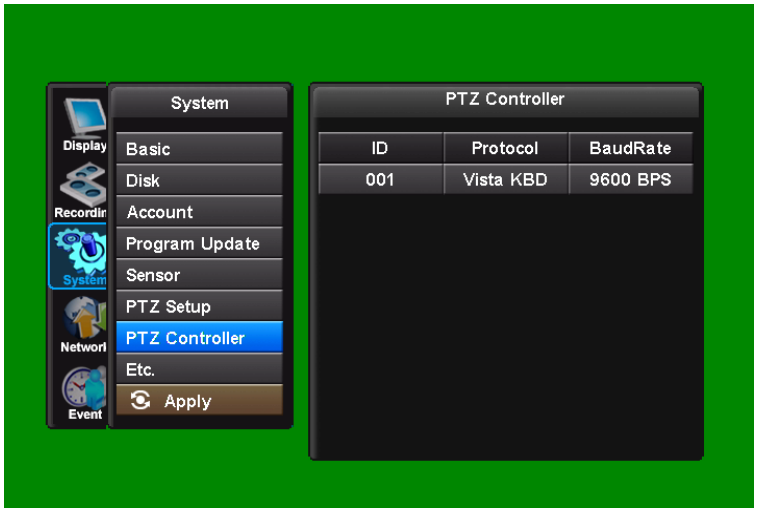
The Quantum Plus can control PTZ cameras via coax or a RS485 connection on the rear of the DVR. The cameras can have individually selectable Protocols with a choice of Vista Coax, Vista PD, Pelco P or Pelco D. The Baud rate can also be selected.

3-6. PTZ Controller

The Quantum DVR needs to be setup to accept the VKBD3im or VKBD4 keyboard, as a default this will be set to the correct Protocol and Baud rate.

ID – This sets the RS485 Address of the DVR.

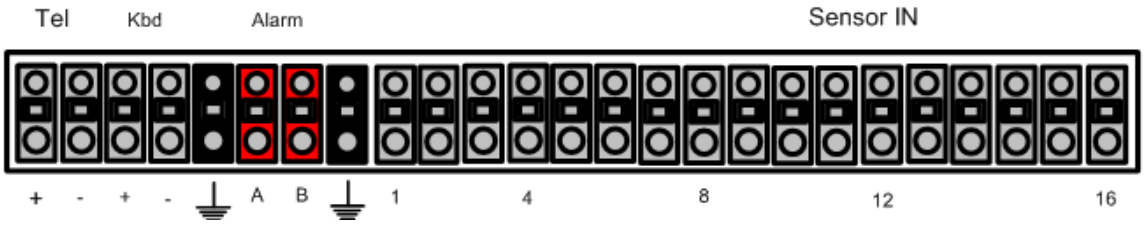
The Keyboard ID should not be the same as the DVR, see keyboard manual for addressing.



Telemetry connections and User Instructions

Remote Keyboard Connections

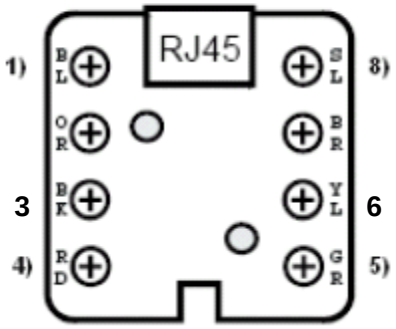
The connection of the VKBD3im keyboard to the Quantum Plus DVR, is made via the push connectors marked as **Kbd** on the rear of the DVR, These are the 3rd and 4th connecters to the left hand side of the bank of push in connectors.



Use the break out box and one of the RJ45 Leads supplied with the VKBD3im keyboard.

Connect pin **3** of the break out box the **Kbd(+VE)**
Connect pin **6** of the break out box to the **Kbd(-VE)**

Breakout Box Pins

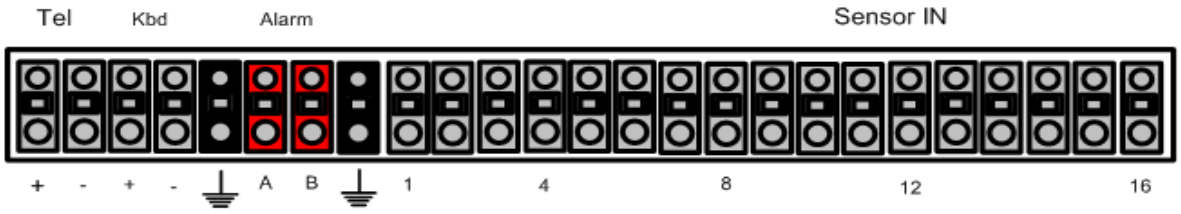


Connect the break out box to the keyboard using the RJ45 patch lead.

More detail can be found in the VKBD3im manual

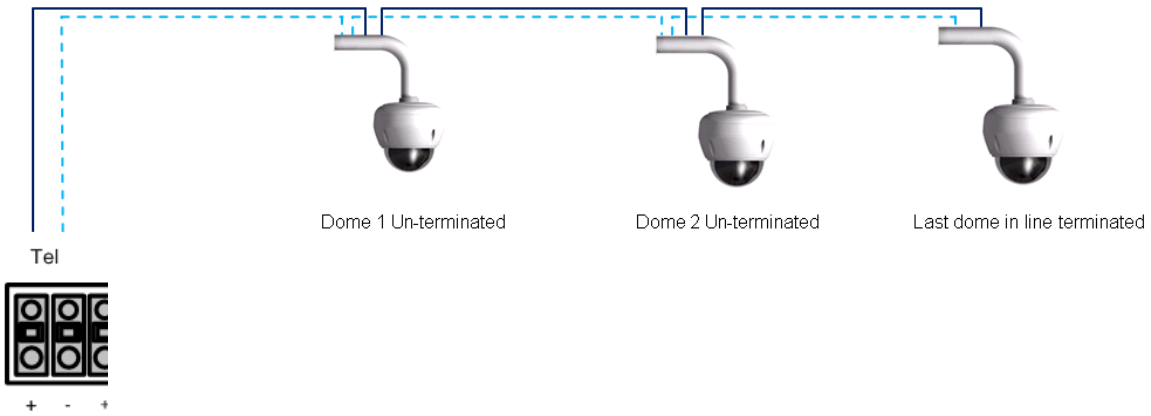
RS485 Dome Telemetry connections

The connection to RS485 domes is made via the push connectors marked as **Tel** on the rear of the Quantum.

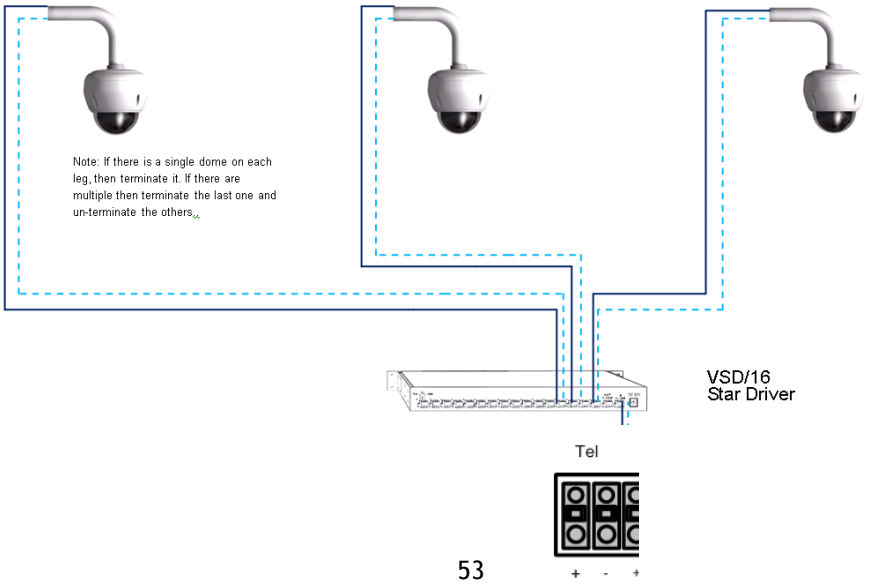


The domes can be wired either in a Daisy chain or star configuration, examples shown below. If using a Star configuration you require a “VSD16” RS485 star driver.

Daisy Chain configuration



Star Configuration


Note: If there is a single dome on each leg, then terminate it. If there are multiple then terminate the last one and un-terminate the others.
VSD/16
Star Driver
Tel
+ - +

PTZ user instructions

The telemetry function of the Quantum Plus can be controlled via 4 different methods:

1. Remote keyboard
2. Front panel buttons
3. Remote control
4. Software viewer

Remote Keyboard – See keyboard manual for control of PTZ cameras

Front Panel

Camera selection

The PTZ cameras can be controlled in either full screen or split screen mode. If in full screen mode press the camera selection key , the camera icon will step from one camera to the next on the split screen. When the icon appears on the camera to be controlled then press the PTZ key .

If in full screen mode then simply press the PTZ key .

Pan and Tilt control

To move the dome left / right / up or down use the arrows keys .

Zoom and Focus control

To select Zoom and Focus press the Zoom Key ,

Zoom + =

Zoom - =

Focus Near =

Focus Far =

Preset positions

1. To store a preset position

Move the camera to the required position then press the record key followed by the number key of the preset to be stored (1 – 9)

2. To recall a Preset

Press the search key

followed by the number (1 -9).

Run Tour 1

To run Tour 1, press the search key

followed by the number 0 (Zero). The tour requires a keyboard to set it up in the domes menu.

Remote control functions

Camera selection

The PTZ cameras can be controlled in either full screen or split screen mode. If in full screen mode press the camera selection key

, the camera icon will step from one camera to the next on the split screen. When the icon appears on the camera to be controlled then press the PTZ key

.

If in full screen mode then simply press the PTZ key

.

Pan and Tilt control

To move the dome left / right / up or down use the arrows keys

.

Zoom and Focus control

To select Zoom and Focus press the Zoom Key

, Zoom + =

Zoom - =

Focus Near =

Focus Far =

Preset positions

3. To store a preset position

Move the camera to the required position then press the record key

followed by the number key of the preset to be stored (1 – 9)

4. To recall a Preset

Press the search key

followed by the number (1 -9).

Run Tour 1

To run Tour 1, press the search key

followed by the number 0 (Zero). The tour requires a keyboard to set it up in the domes menu.

Dome Menu access

When controlling Vista PowerDome PTZ domes from the Quantum Plus, it is possible to enter the Dome's menu structure, using the Remote Keyboard, Front Panel Keyboard, Mouse or the Client software. The method from each device is slightly different; the following section will explain each method.

Remote Keyboard

1. Select Dome from the Keyboard, ensure the keyboard is in Pan and Tilt Mode (make sure the dome moves)
2. Select the dome menu key (from VKBD4 this is press and hold the camera key , while holding it, press and release the Mode key

)
3. The Dome menu password screen will appear.
4. Use the Joystick to move around the menus, Enter is

and Escape is

.

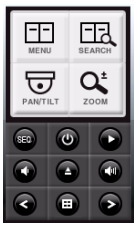
   To exit the menu mode repeatedly press the Escape key.

Front Panel Keyboard

1. Press Menu key, the password box will appear

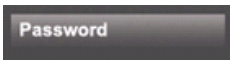
2. Enter 1,2,3,4, then hit select key
3. The Dome Password Menu will appear
4. Use the arrow keys, e.g. to move around the menus and the "Play forward" = Enter; "Play reverse" = Escape.
5. To exit the menus repeatedly press the "Play Reverse" button.

Mouse



1. Right click mouse
2. Mouse menu screen will appear:
3. Left click MENU

4. The password box will appear
5. ENTER 1, 2, 3,4



6. Click On the word
7. The Dome Password Menu will appear
8. Using the Arrows enter the Domes password,
9. Once in the Menus use the arrows to navigate.
10. To Exit repeatedly press ESC
11. To remove the navigation arrows, right click.

Client Software

1. While Client software is running select the dome required.
2. Enter Pan and tilt mode by clicking on the icon

3. The Pan and tilt control window will appear
4. Click on the central button

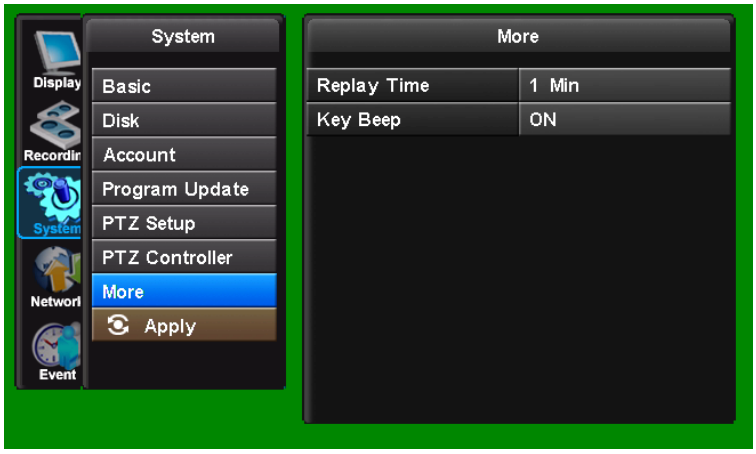
5. The following box will appear
6.
7. Select the Dome Button
8. The dome password menu will appear

9. The pan and tilt control window will change to the following
10. Use the arrows, SEL (ENTER) and PREV(ESCAPE), to navigate around the menus

11. To Exit the menu mode repeatedly press PREV.

12. To return to PTZ mode press the button.

3-7. More.



Replay Time: The Replay time can be set between 1 and 60minutes. When set and the play back button is pressed, this is the period that the DVR will step back from the current time to start replaying.

Key beep: The key beep from the front panel can be turned On or Off.

4. NETWORK

(If the DVR is connected to a network, this icon will be shown in the OSD display)

This menu can only be accessed if the user has the necessary rights. (Default password is 00000000).

With in the Network menu the DDNS (Dynamic Domain Named Server), IP addresses, NTP and Live can be set.

4-1. DDNS

What is DDNS?
DDNS is a service that maps Internet domain names to IP addresses. DDNS serves a similar purpose to DNS: DDNS allows anyone hosting a Web or FTP server to advertise a public name to prospective users.

Unlike DNS that only works with static IP addresses, DDNS works with dynamic IP addresses, such as those assigned by an ISP or other DHCP server.

What this means is that the DVR does not need a Static IP address to be available for viewing remotely over the World Wide Web.

Please refer to Appendixes 4 on how to set up the DDNS service.

DDNS-DVR.COM (Auto)

To make using the DDNS service easier each DVR has been pre configured in the factory with it's own individual DDNS set-up, this uses the DDNS-DVR.COM service. To access this feature select: DDNS-DVR.COM(AUTO)

The Domain section of the menu will display the MAC address of the unit (16 digit number).

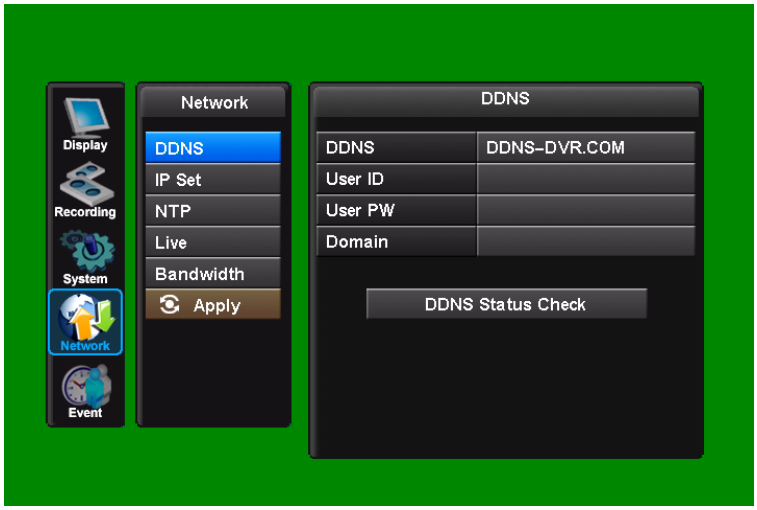
Note:

1. DYNAMIC IP must be set to: YES

2. Port forwarding has to be set-up in the router using the dynamically assigned IP address and the DVR Port set in the IP set section

3. When connecting to the unit from the client software, the address to enter will have to be in the following format:

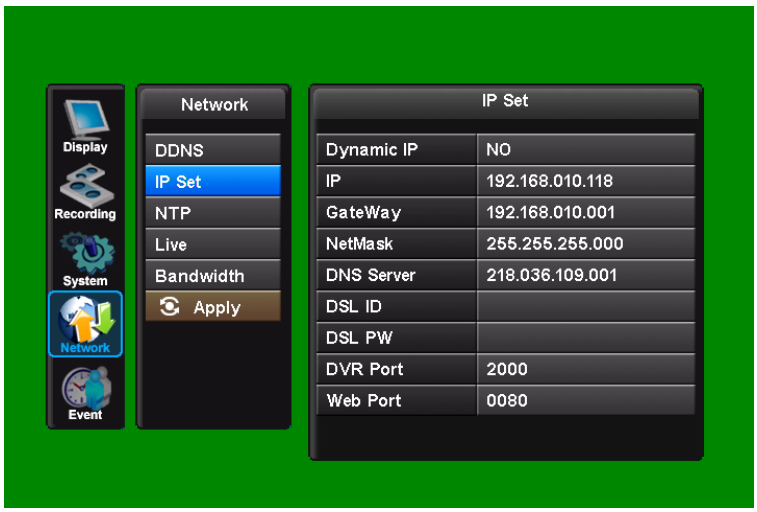
http://(16digitMACaddress)@ddns-dvr.com



4-2. IP SET

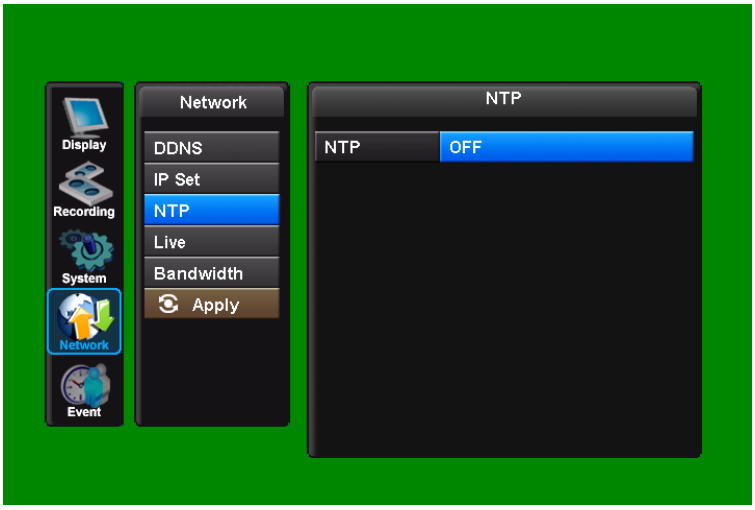
When a fixed IP address is being used, the Use Dynamic IP should be set to NO
The IP Address, Gateway and Subnet Mask need to be set, these will generally be given by the Network Manager.
DSL refers to all types of Digital Subscriber Line such as ADSL and SDSL.

The DVR Port and WEB Port can both be changed if required, default are 2000, and 80 respectively.

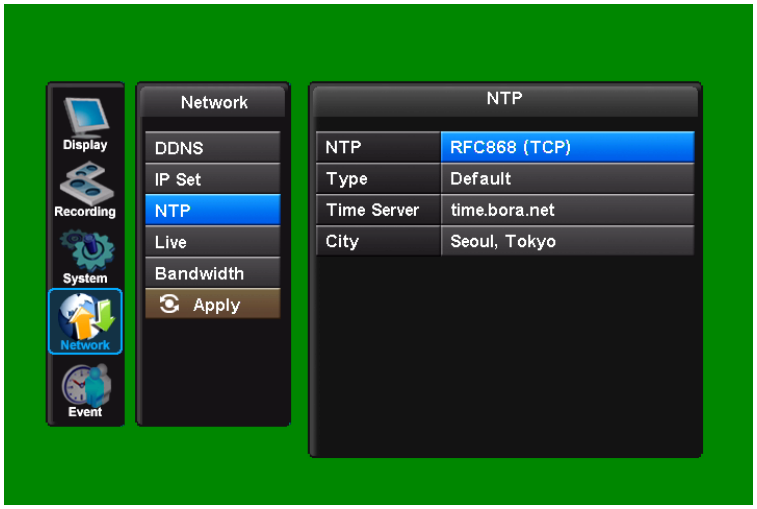


4-3. NTP

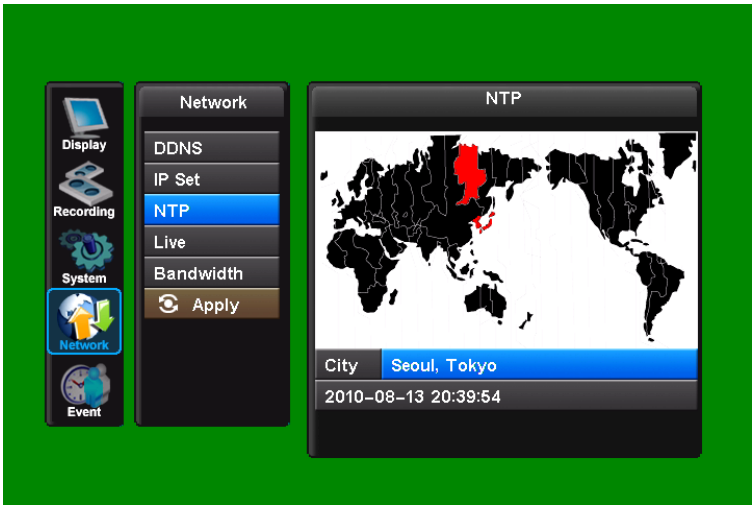
The Network Time Protocol Setting allows the DVR time to be synchronised with an external time server.



The default is NTP OFF.



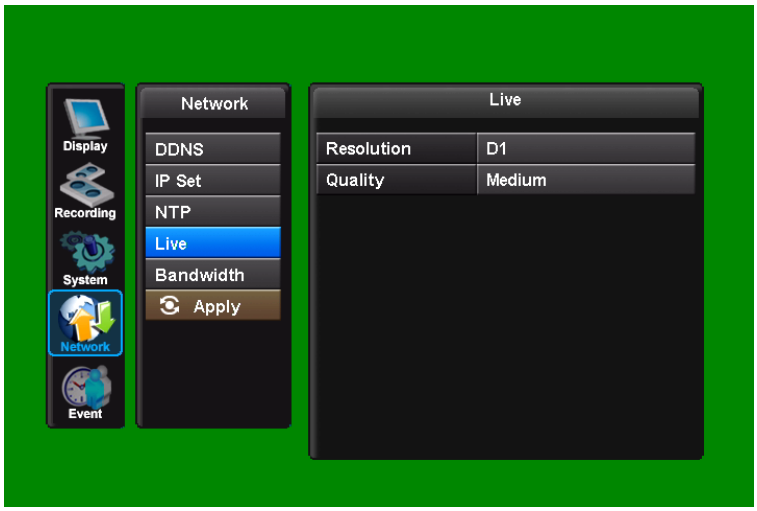
When turned on the Type of service can be selected, options are Default (time.bora.net), Domain and IP.



The Time zone can also be chosen within the City selection, use the right arrow on the front panel to change the city settings.

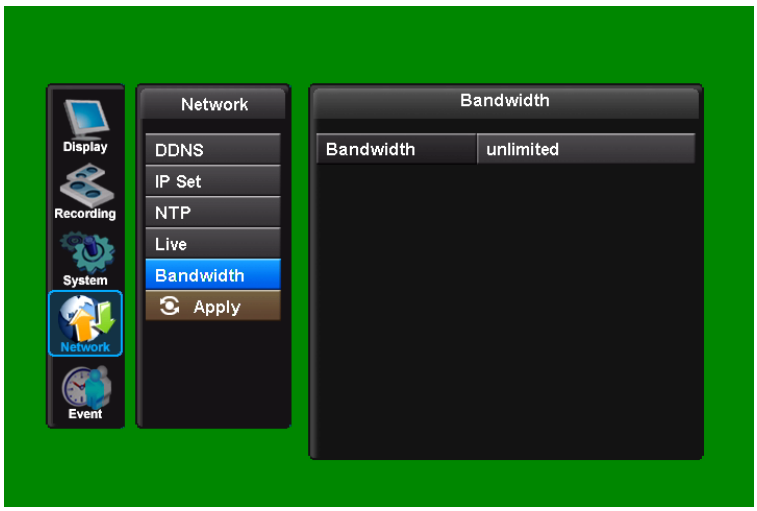
4-4. LIVE

This allows a separate Live viewing resolution and Quality over a network connection, regardless of System Recording and Quality, to be set for remote viewing, this helps optimise the network streaming.



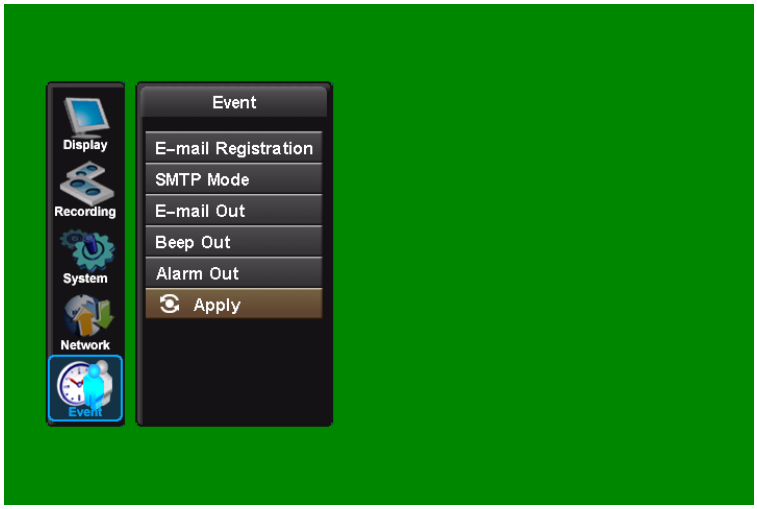
4-5. Bandwidth

It is possible to set maximum limits for the bandwidth utilisation on the network port of the unit., This can be set in Kilo Bytes per second (kBs)



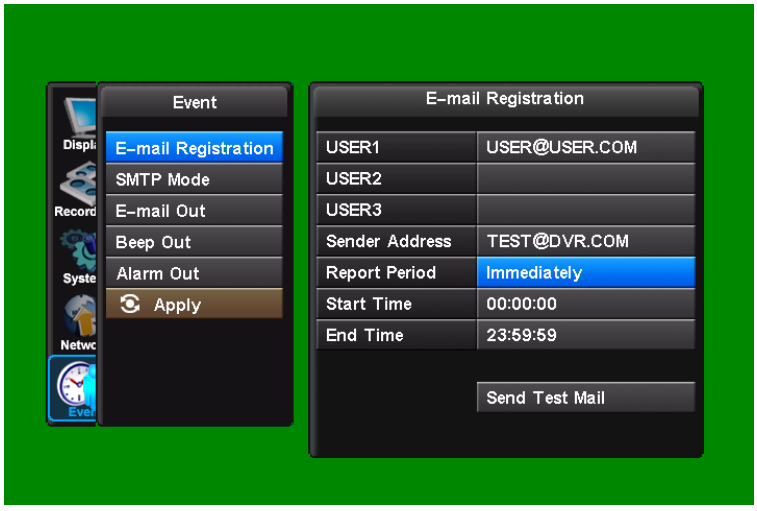
5. EVENT

This section is used to inform the user as to an event occurring, this can be by the sounding of a buzzer or by sending an E-mail to a predefined address.



5-1. E-Mail Registration

Within this section up to 3 users can be set-up to receive an email on the occurrence of an event such as Video Loss / Alarm / Motion or Power Loss. An E-mail will only be sent if the Quantum Plus is sitting on a network with access to the Internet, e.g. through a router.



The e-mail addresses are set via the alphanumeric buttons on the front panel, or from the on screen keyboard via the mouse.

The Sender Address is the address that will appear on the E-mail received by the user, this should be set logically to identify the specific DVR. e.g. QUANTUMPLUS@NORBAIN.CO.UK

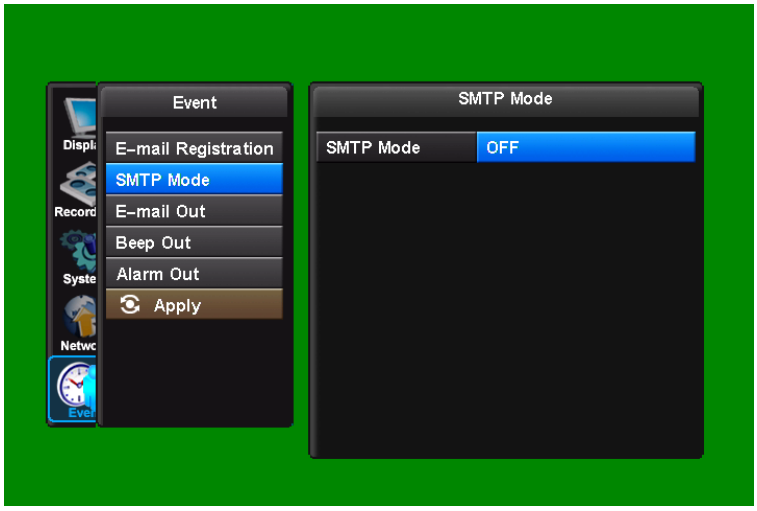
The report period is used to set how often e-mails are sent: Immediately on and event, Daily or Weekly

Start/End Time : Enable to send e-mail notifications only for events that occur within a

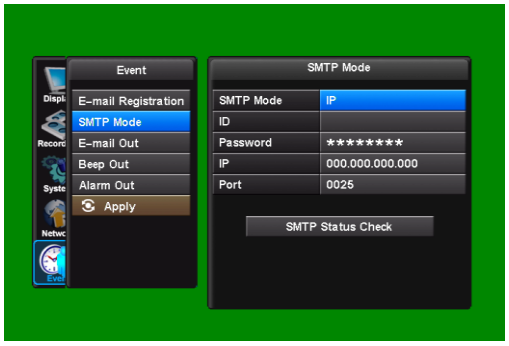
specified range of time.
SEND TEST MAIL sends a test E-mail to the addresses so allowing the installer to verify if the setup is correct.

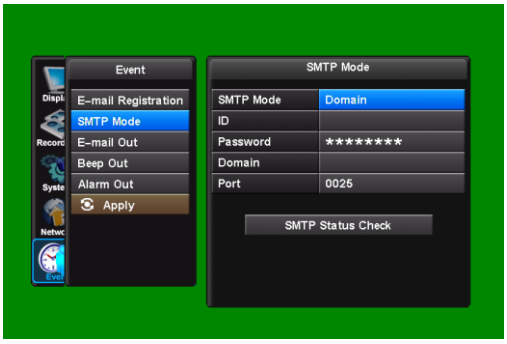
5-2. SMTP Mode

The SMTP (Simple Mail Transfer Protocol) function allows e-mails to be sent over a LAN
The default is SMTP Mode “OFF”. In this mode the DVR will operate using its internal mail server. Therefore no user / installer setup is necessary.



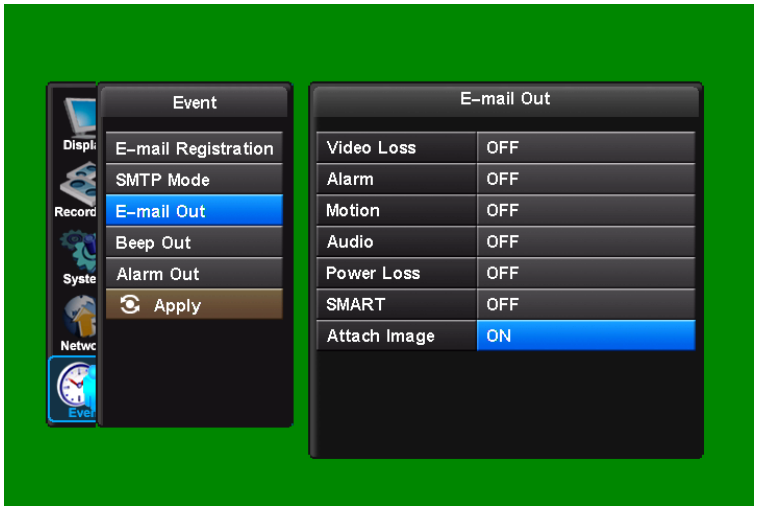
If it is necessary to use a particular (non default) SMTP mail server, then set the SMTP to either IP or Domain, dependant on information supplied by your IT manager.
Then, enter ID, Password, IP address, and port.
Finally press “SMTP Status Check” to test.
Please see the screen shots that follow:





5-3. E-mail Out

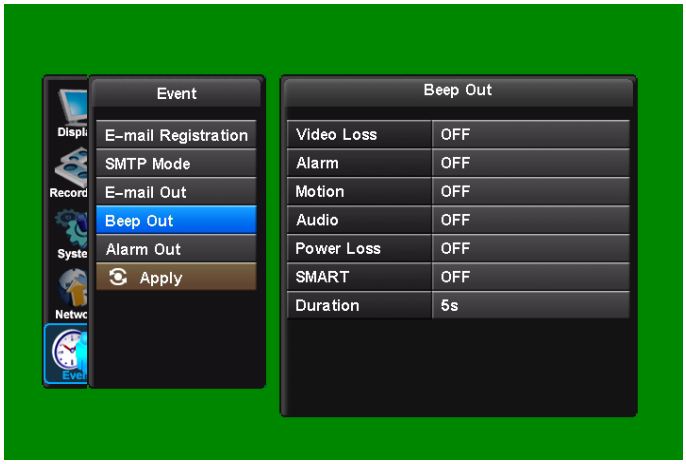
As well as e-mail on event activations the Quantum can be set to send a report on the following occurrences: Video Loss; Alarm; Motion: Power Loss and Smart (Hard disk monitoring).
Attach Image : On/Off (Enable to send a picture of the event.)



5-4. Beep Out

The buzzer can be set to sound on the following occurrences: Video Loss; Alarm input; Motion detection; Power Loss; Smart (Hard disk monitoring).

The duration of the beep can be set.



5-5. Alarm Out

The Alarm out relay can be set to activate on the following occurrences: Video Loss; Alarm input; Motion detection; Power Loss; SMART (Hard disk monitoring).The duration of the activation can be set.

Relay Follower

This allows the full screen images of several DVRs to be viewed on a single monitor. A relay can be set to close each time a camera is selected.

This relay closure can be used as the Alarm input to a switcher, such as the VS042A. If the Monitor outputs from several DVRs are taken to the inputs of this switcher, then each time a camera is selected, the switcher will change it's output to the relevant DVR monitor picture.
This allows the full screen images of several DVRs to be viewed on a single monitor.

Relay Control

Normal = Relay will close when an alarm activation is received

On = Relay permanently active

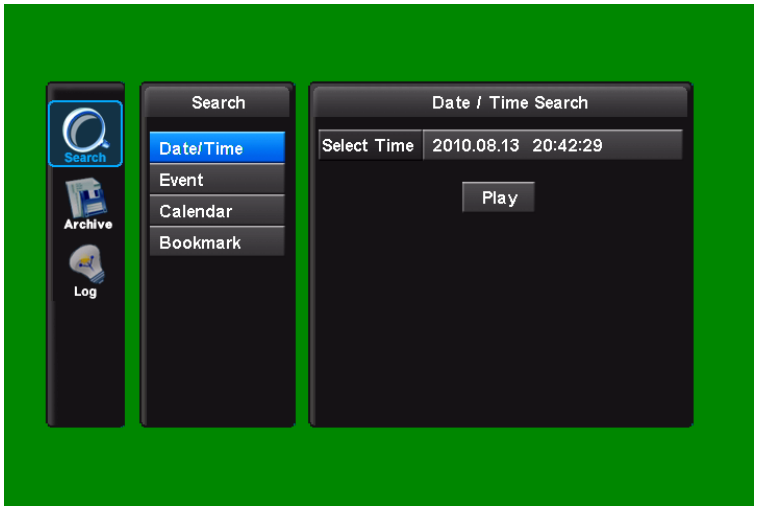
Off = Relay not active

SEARCHING VIDEO FOOTAGE

To access the search option enter the Playback mode by pressing Play or the Search key, next press the SEARCH key again or right click the mouse and select Search, (A password may have to be entered) after which the following screen will be displayed.

1. Date / Time Search

If you select date/time search, the following will be shown. Use the numerical number on the front panel or the mouse to select the time and date required, then select Play.

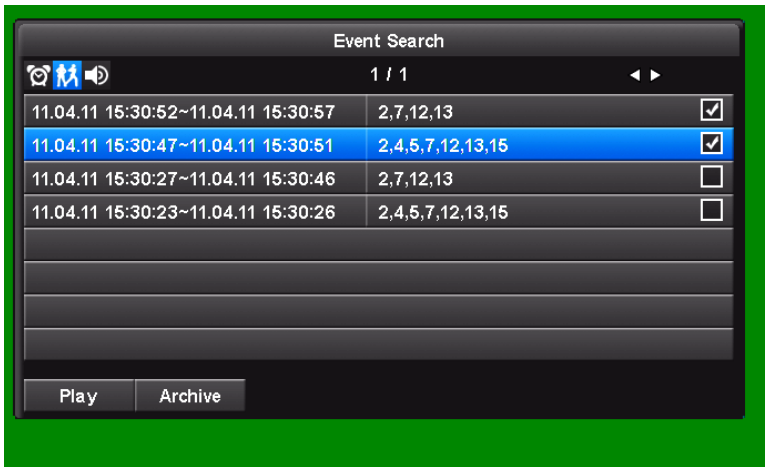


To exit this mode at any time press Search. This will step back one stage at a time.

To Exit Playback and return to Live press the Stop button.

2. Event Search and Multiple Event archiving

This allows the user to select between ALARM, MOTION or AUDIO. Select required icon, a list of events will be displayed as shown below. With the option to Play or Archive the results

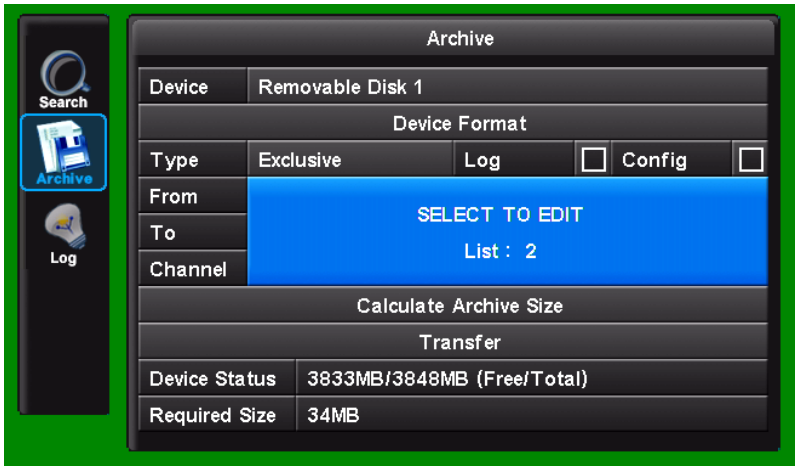


Select the event by ticking the box on the right.

To Play this event click on Play. To return to live click stop . To step forward and backward through events use

To archive the event click on Archive.
Note: Multiple events can be selected to be archived onto the same media.

When the archive button is pressed the following screen will be displayed:



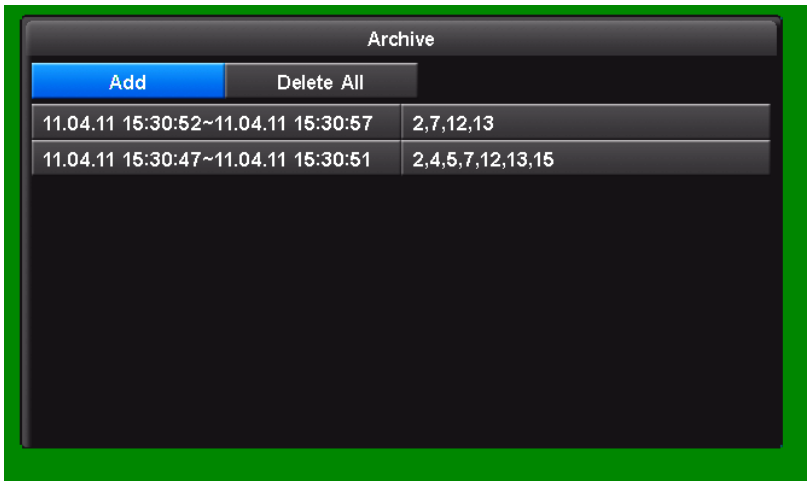
This will show the number of event selected to archive. This can be amended by clicking on the highlighted box.

If the details are correct select the Calculate Archive size to confirm the archive medium contains enough memory for the selected list.

Then select Transfer. The selected items will now be archived onto the selected medium.(USB, CD/DVD).

Normal operation of the DVR can be resumed; while the archive is being downloaded.

If the Archive list needs to be edited click on the “SELECT TO EDIT” box. The following box will be displayed.

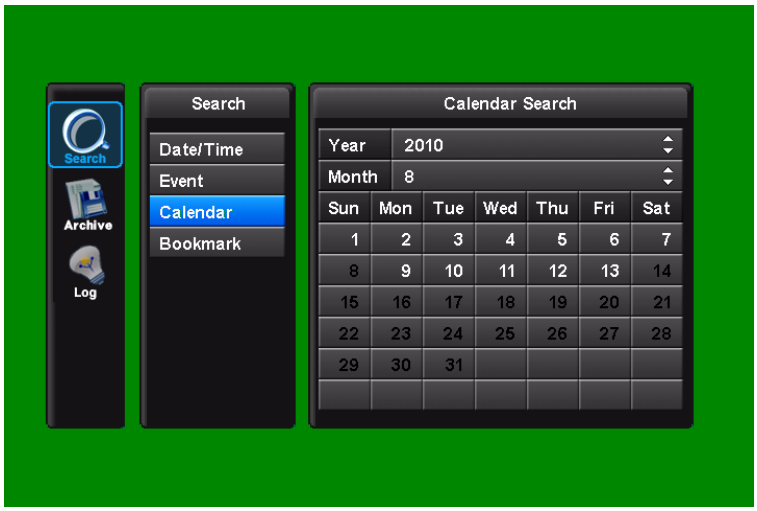


Using this selection all items can be deleted or additional time periods can be added.

These additional time periods are added by manually inputting the start and stop times.

3. Calendar Search

Following screen is displayed when “Calendar” search is selected.

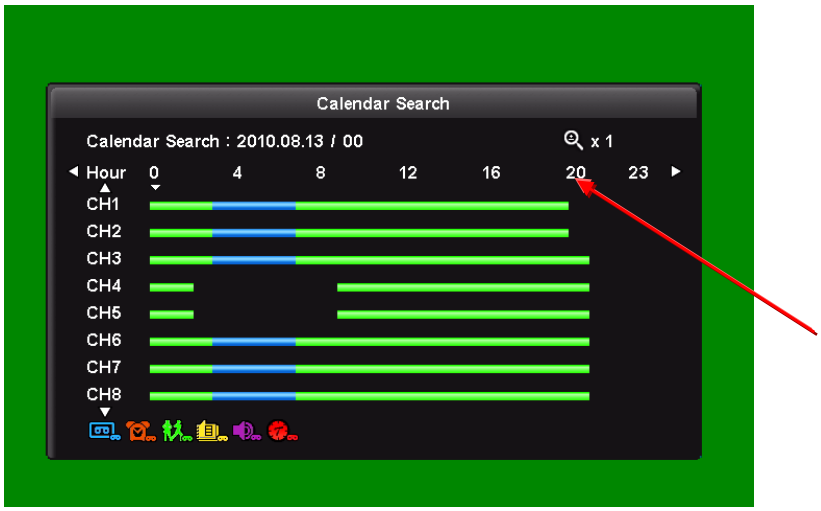


To exit this mode at any time press Search. This will step back one stage at a time.

To Exit Playback and return to Live press the Stop button.

The Calendar search gives a graphical representation of when video is recorded on the hard drive.
The year and month can be selected. This month is shown as a calendar on the screen, any day which contains recorded video will be indicated by a highlighted number in white.
Move to the desired day by using the up / down / left / right buttons, Select the day by pressing SEL.

The following screen will be displayed.

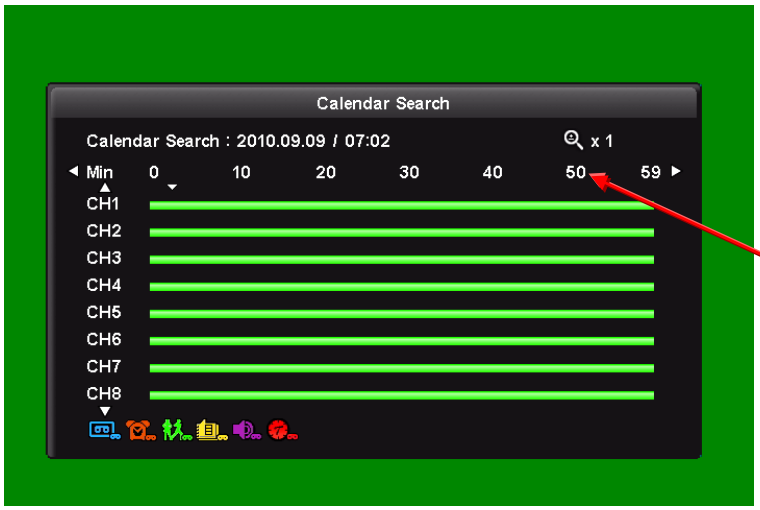


To exit this mode at any time press Search. This will step back one stage at a time.

To Exit Playback and return to Live press the Stop button.

Hours of the day

The hours which have recorded data are displayed as a coloured bar. Select the hour which you want to review, the following screen will be displayed.



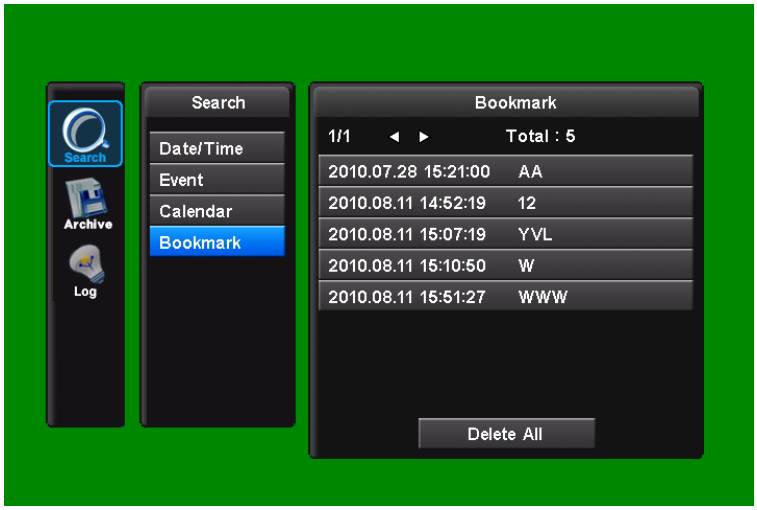
To exit this mode at any time press Search. This will step back one stage at a time.

To Exit Playback and return to Live press the Stop button.

The minutes which have recorded data will be displayed as a coloured bar, click on the time required; the recorded data will be played back from this point.

4. Bookmark Search

It is possible to edit the bookmark.



To exit this mode at any time press Search. This will step back one stage at a time.

To Exit Playback and return to Live press the Stop button.

At any point while reviewing play back the recording can be tagged with a Bookmark, by either clicking on the on screen icon

Or by pressing the Book mark button on the VKBD4 keyboard (If connected).

Playback Icons

When the Quantum DVR enters the playback mode the following tool bar appears at the bottom of the screen:

Note: This tool bar only appears **if the mouse is connected**

Or alternative tool bar when in Event Search mode:

Note: if the toolbar disappears after a period of time check the OSD screen display settings the menu, as these can be configured to hide the tool bar after a preset interval.

Split screen selection icons

Stop, Pause, Reverse, Forward play(fast forward and reverse by clicking play forward and reverse multiple times)

Slow play forward and Reverse

In Event search this allow stepping forward and back between events

This toggles between Slow Play and Event stepping modes

Add and edit bookmark name, allows the name of bookmarks to be logically named

Bookmark search, list all bookmarked sections

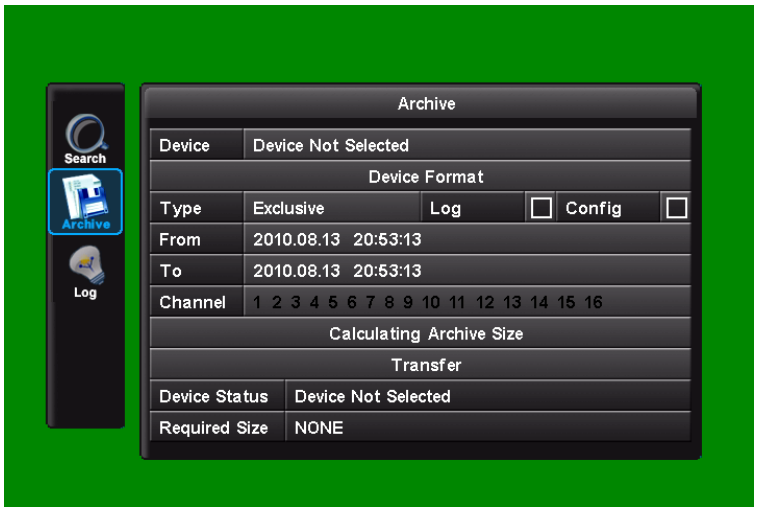
Replays from “X “minutes prior to current position (X set in: Menu / System / Etc / Replay Time)

Click on this icon to enter the Quick archive mode (see Quick archive explanation on page 71)

Archiving Evidence to DVD/CD or USB

Once the required video has been found**,** it may be necessary to down load it for evidential purposes. This can be done either onto the internal CD/DVD-R writer or via the USB port on the front of the Quantum Plus.

To do this press the SEARCH button and using the down button move to ARCHIVE, once highlighted press SEL, the following screen will be displayed.



Device
This allows selection between the internal CD /DVD-R writer and the FLASH option via the USB port, when highlighted use the right arrow to toggle between the options.

Device Format
Format for **CD/DVD-R** is **not** needed. When using a USB pen, the format should be done first.

Type
EXCLUSIVE file type
If evidence is downloaded as an Exclusive file, the Quantum Plus will download bespoke player software on to the CD / DVD or USB device along with the evidence. This means that no special software is required, by the reviewing PC. This format is secure and watermarked.

LOG
The Log file can be downloaded from this menu screen, simply tick the LOG box and do not select any camera channels, then select transfer.

Config
The Configuration files for the DVR can be downloaded and saved.

From/ To

You can set up the start and stop time which is required to be backed up to the internal CD/DVD-R or USB device. Highlight this option, then press SEL, then use the alphanumeric buttons or the mouse to set the time and date. Repeat for the end time.

Channel
As long as the EXCLUSIVE file format is selected, the number of channels to be down loaded can be selected. Anything from a single channel to all 16 can be selected.

Calculate Archive size
Once the time and date and file format have been entered, it is necessary to confirm that the size of file created will not exceed the size of memory available on the disk or USB device. Move to Calculated Archive size and press SEL.
The Quantum Plus will then calculate storage space required for download file. This will be displayed in the Required Size section. As long as the Required Size is smaller than the Free/ total space, then move to Transfer and select it.

Transfer
When Transfer is highlighted press SEL, the downloading will start. Percentage done during downloading will be shown.

USB compatibility: the following have been tested

Lexar JumpDrive	128/256MB
SanDisk Mini Cruzer	128MB
SanDisk Cruzer Micro	256MB, 512GB, 1GB
KINGSTONE	2GB
A-DATA	2GB
IMATION	2GB
MARUZEN	1GB
DVD/RW Plextor	PX-716UFL
Lite-On CD/RW	(LTR-52327SX)

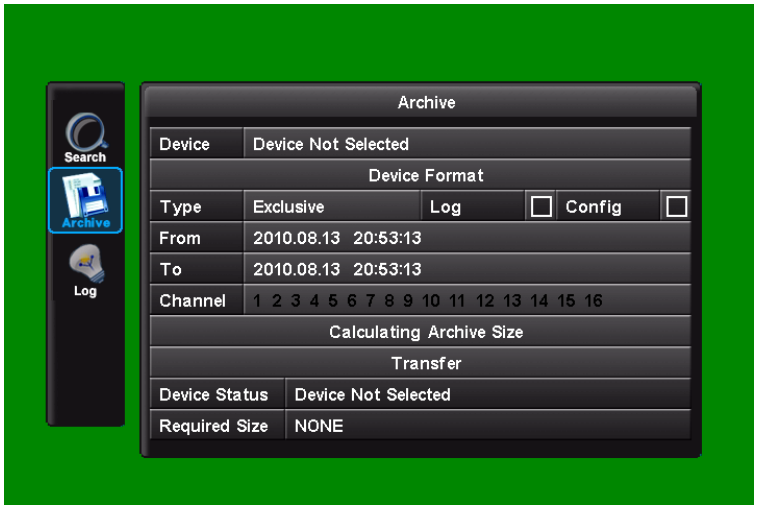
Quick Archive

The Quick Archive function can be accessed either via the Q-Arc key

on the VKBD4 keyboard or from the Quick Archive icon Q displayed on the playback tool bar. To Display the playback toolbar right click on the Live screen and select the playback icon .

When Quick Archive is selected the, Archive screen will appear, the DVR will search either a USB drive or CD/DVD.

Once found the following download screen will be displayed:



The DVR will have set the From and To sections to completely fill the archive media, with the time at which the Quick Archive section was made in the middle of this time period.

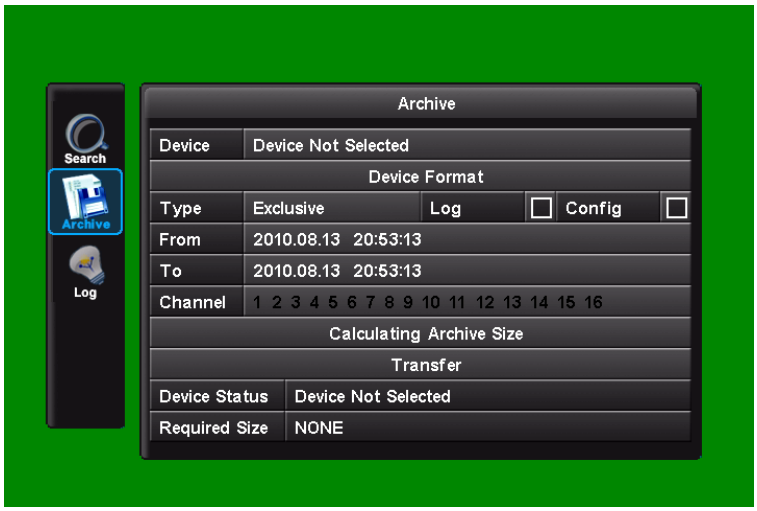
This time period and the number of cameras can be adjusted, to suit, otherwise simply select the Transfer button to start down loading.

Direct Play back Archive

While reviewing recorded information it is possible to tag a start and stop time, which will then automatically open the Archive menu with these times pre loaded.

This function is only accessible via the mouse. Ensure an Archive media is present e.g. CD/DVD or USB

1. Enter the Play back mode using either Calendar or Time and date search
2. Review the recorded data.
3. When the required archive start point is reached, select pause:
4. Tag this point by selecting the slow play back arrow:
5. To start playing forward select pause: .
6. When the archive end point is reached select pause again:
7. Tag this point by selecting the slow forward arrow:
8. Selecting the slow forward arrow will automatically bring up the Archive menu with the **To** and **From** time pre filled with the time selected.



9. Select the necessary cameras.
10. Calculate the Archive size
11. Assuming there is the required space available on the selected archive media, select the Transfer function button. The Archive process will start.

Multiple Event Archiving

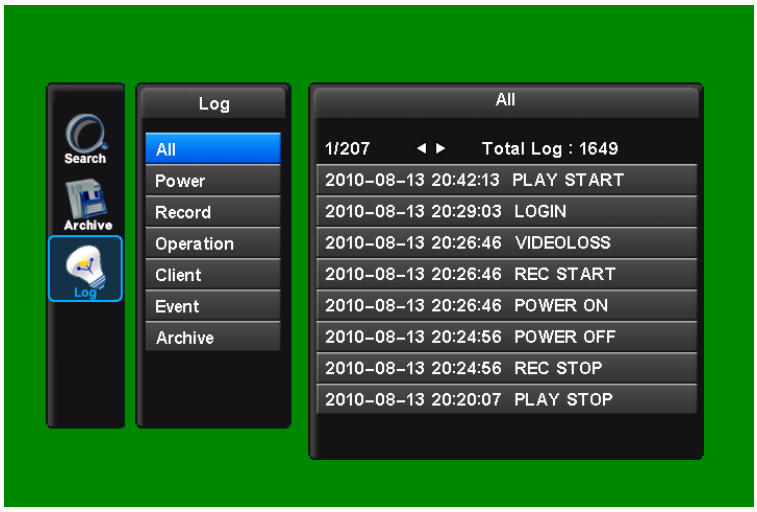
If using the EVENT search method it is possible to select multiple Events from the search lists and download them all at the same time to a single medium – e.ge, USB, CD or DVD. For information on this please refer to the Event Search and Multiple Archiving Mode on page 69 of this manual.

LOG

The log file contains information on the following:

Power:	Power on, Power off, Power fail
Record:	Rec fail, Rec start, Rec stop, Rec error, Rec full
Operation:	Play start, Play stop, HDD format, Menu set
Client:	R_Login, R_Logout, R_Logfail, R_Play, R_Transfer, R_Rec on, R_Rec off, R_Upgrade
Event:	Alarm, Motion, Audio, Video loss, Email fail
Archive:	This lists the USER, time/date when Archive was done, and time range of archived section.

A total of 2500 events can be recorded the oldest being overwritten when a new one occurs, they can be viewed all together or as individual types.



Client Viewer software – QT Player

Each Quantum comes with license free viewer software to view the Quantum across a network.

To be able to do this the recommended minimum specification for the PC is as follows:

Minimum PC specification

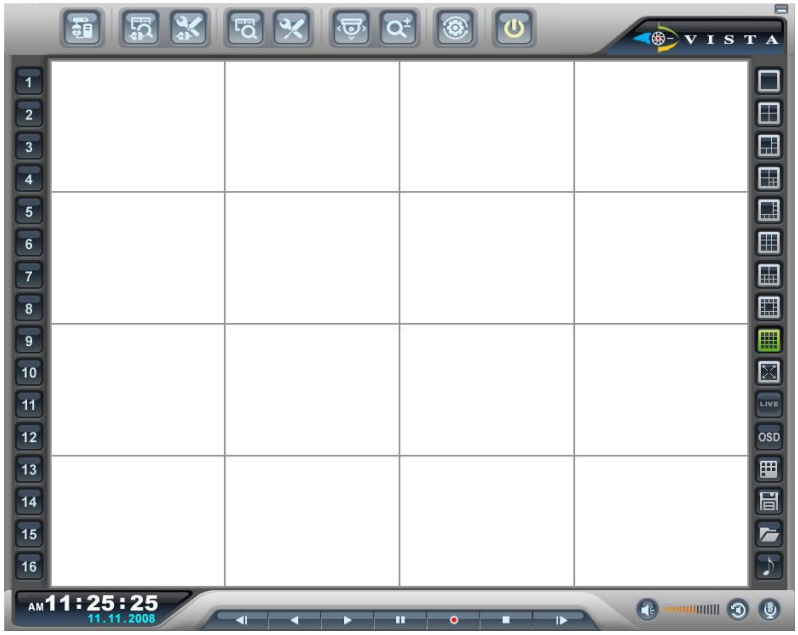
> CPU: Core 2 Duo 1.8GHz,
> Graphic Memory: 256MB

Installing software

When you put Quantum Network installation CD into your PC, it will auto run and lead you through an installation wizard. Follow the instructions. Once the software is loaded it will automatically run.

Connection

To connect to the Unit, open the Viewer Software and click the connection button,



Logging on

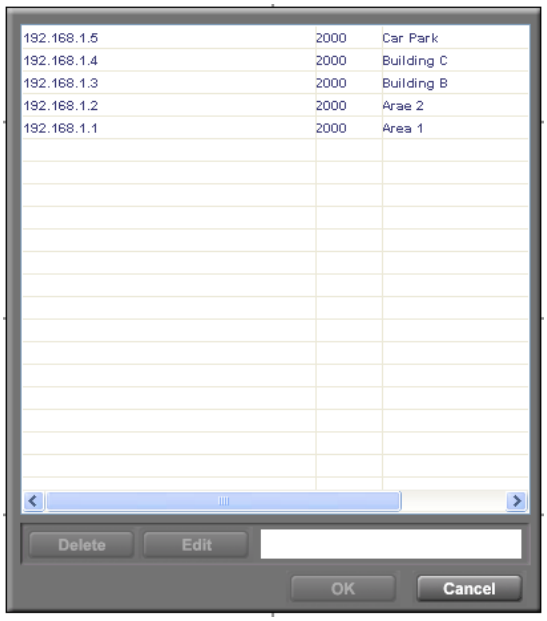
The following window will appear.

To connect to the Quantum, enter the units: IP address; DVR Port (2000 ids default), ID and Password. Then, click “OK”, to start the live monitoring.

Description field is the name of area / Building / location of the DVR, this should be typed in he first time the unit is connected to, this will store it in the address book.

Address book

Click on the Arrow to the left of the IP address, the following box will appear. This lists the last 22 units that have been accessed. To reconnect to one of these units simply double click, then add the ID and Password.



Explanation of Screen Buttons

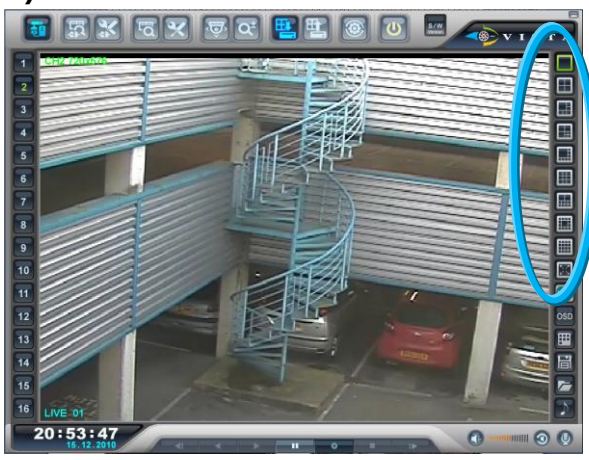
Live Monitoring

The software is best viewed with the PC monitor resolution, set to: 1024 x 768.

Split Screen options (1, 4, 6, 7, 8, 9, 10, 13,16):

Spilt Screens can be viewed during both live and playback. The splits screens available are: full screen,4,6,7, 8,9,10,13 and 16 way.

1) Full Screen



2) 10 Way

Full Screen on/ off

When the full screen button is selected, a tool bar offering the various split screen options, and the Exit key will be displayed at the bottom of the screen.

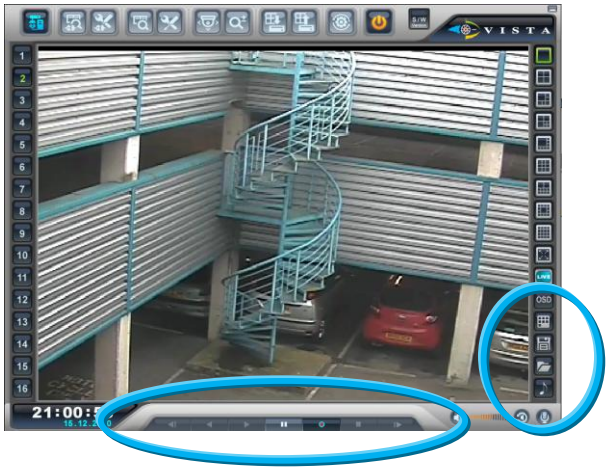
OSD on/off:

The OSD button will toggle between the on screen titles etc being shown or hidden

(SMART)ARRANGE ON/OFF:

If Cameras are being displayed in segments that are not logical, the Smart button will rearrange and put camera input 1 into segment 1 (Top Left) etc.

Image Save / Load: **/**



SAVE: This icon is used to save a still image in either JPEG or BMP or TIF format. There is no change on the main screen when the “Save” icon is pressed.

The still image is stored as default in C: QTPlayer: Saved folder, as a Jpeg image using the date and time as the file name.

LOAD: This icon is used to retrieve and view a saved still image, when selected a list of available images will be shown. Select to one required, it will be displayed along with data information (Status-Live/Playback, IP address, CH No.).

Playback (Step Backward, Backward, Playback, Pause, Recording, Stop, Step Forward)

Audio (Mute, Volume, Select Audio, Microphone)

Select Audio: Toggles through audio channels.

Microphone: It is used for transmitting audio to the System through a microphone.

Remote search

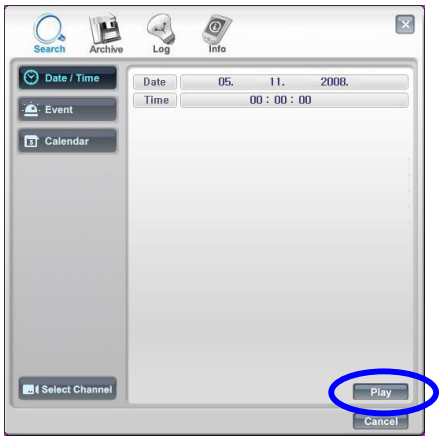
Search (Date/Time/Event/Calendar), Archive (Remote Archive), Log (Remote Log) are available.

SEARCH

This Remote Search is able to play back video on the PC direct from the hard disk storage on the Quantum Plus. There are 3 options for as follows.

1) Date/Time
2) Event
3) Calendar

Date/Time

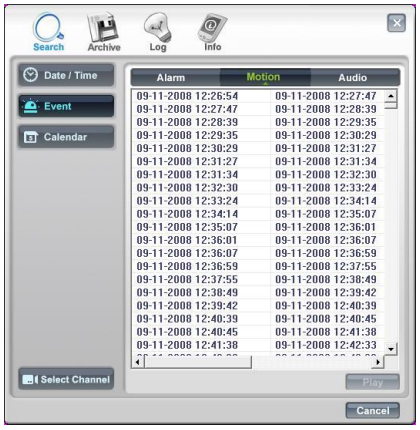


When the cursor is placed over a part of the time and date a drop down arrow will appear, use this to set the required value.
When set.

Click “Play” button, this window disappears and Remote Playback will start.

To stop playing back press Stop the search screen will appear to allow another search to be carried out, if not required, click cancel followed by live.

Event



Click on the Event button on the right hand side, the software will search for all event types. This may take a short while.

A list of the available events will appear.
To play an Event select it and click Play.

To stop playing back press Stop the search screen will appear to allow another search to be carried out, if not required, click cancel followed by live.

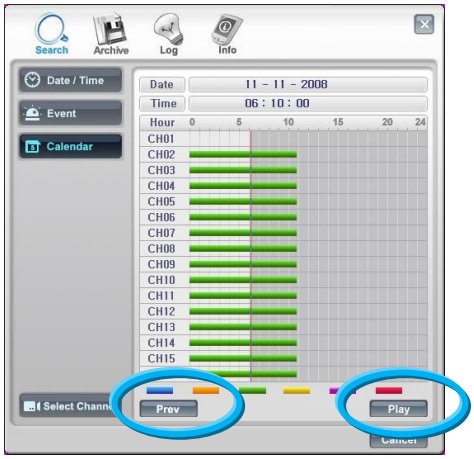
Calendar

Select the date required (as long as the date is highlighted in Blue there is recorded data on from that day).

There are 3 options for selecting the required time once the date has been selected.

1) Drag the Red line along the colour bar (I.e. Blue: Normal Recording) till the required time is reached.
2) Click on the required time for playback on the blue bar then the red line will move to this point.
3) Hover over the time box, a drop down arrow will appear allowing the manual selection of Hours, mins and seconds.

Next click the “Play” button for Remote Playback. Or, click “Prev” to go back to previous stage.



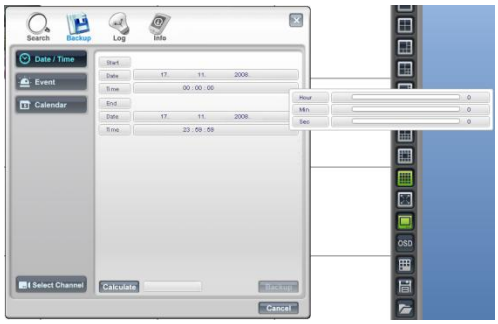
Select Channel:

Channels can be included or excluded dependent on query. This is available within Search, Backup and Logs.

.

ARCHIVE

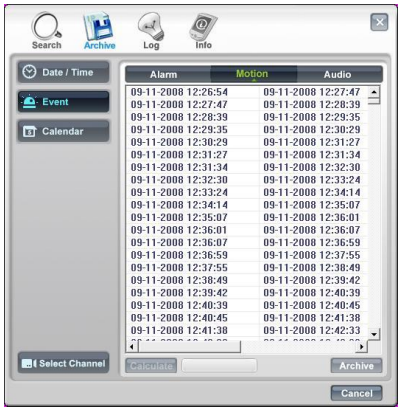
- Remote Archive – Date/Time



Enter the Start and End dates and times, by hovering over the selections, a drop down box will appear.

Once selection is made, then “click” calculate, the file size will be displayed. Finally click “Archive”, the file will be transferred to C:\QTplayer\Download.

- Remote Archive – Event



Select either: Alarm, Motion or Audio from the top of the screen. A list of events will appear.

Click on the event required, it will be come highlighted.

Click on Calculate, the file size will be calculated, this may take a few seconds.

Finally click Archive; the file will be transferred to C:\QTplayer\Download.

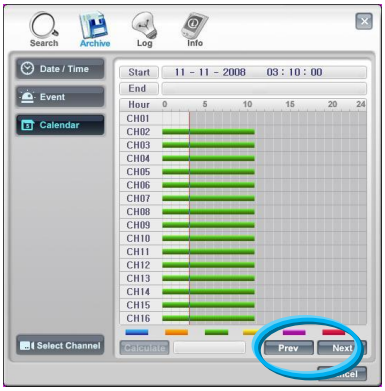
- Remote Archive – Calendar

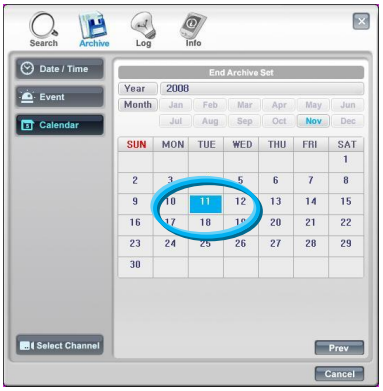
Select the date required (Days with recorded video a data present are highlighted in **Blue**)

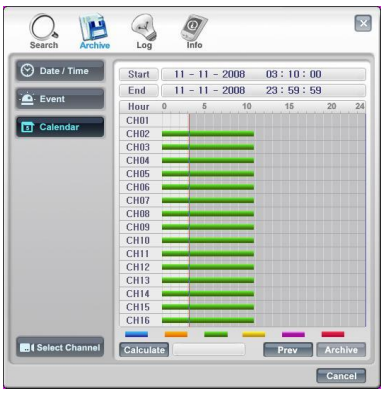
There are 3 options for selecting the required time once the date has been selected.

1) Drag the Red line along the colour bar (I.e. Blue: Normal Recording) till the required time is reached.
2) Click on the required time for playback on the blue bar then the red line will move to this point.
3) Hover over the time box, a drop down arrow will appear allowing the manual selection of Hours, minutes and seconds.

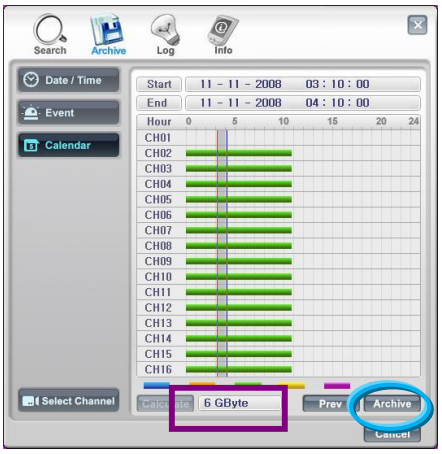
Then click the “Next” button to set “End” Archive time, in the same manner.







The backup procedure is same as Date/Time & Event backup as previous page.



* “Prev” to go back to previous stage.

*The downloaded data is saved in the follows location.

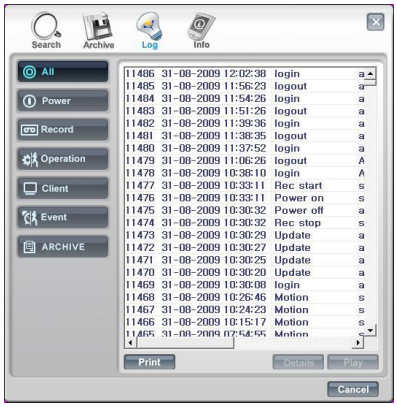
C:\QTplayer\Download.

Play back down loaded files

Open the viewer software but do not connect to a unit, click the cancel button to remove the log on box.

Next click on the Local search button the normal search box will appear, use the same method to search the files on the PC and Play back

Remote Log



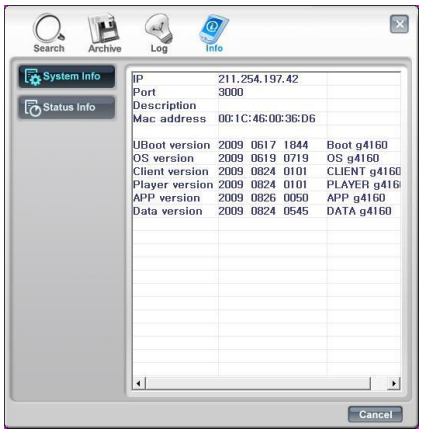
The Log file can either be viewed or printed. The recorded Event can be played, by selecting it and clicking on Play.

The log list can be viewed as a whole or filtered by the following types:

Power:	Power on, Power off,
Record:	Rec fail, Rec start, Rec stop, Rec error, Rec full
Operation:	Play start, Play stop, HDD format, Menu set
Client:	R_Login, R_Logout, R_Logfail, R_Play, R_Transfer, R_Rec on, R_Rec off, R_Upgrade
Event:	Alarm, Motion, Audio, Video loss, Email fail.
Archive	**This is a Password protected section**, only available to users with the correct rights. Click on the Archive button a password entry box will appear, which has to be completed before the Archive log list will appear.

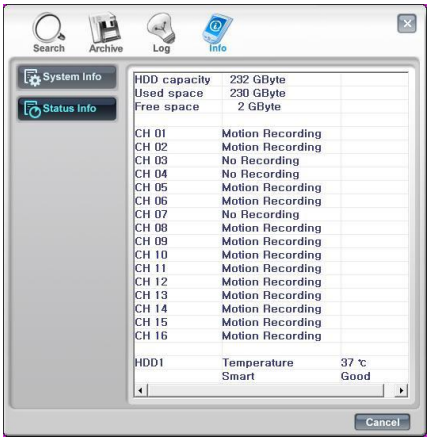
Info

- "System Info" of the Remote Log



The system info displays the Mac address and software version information.

- "Status Info" of the Remote Log



This shows the status of both the Hard disk and the recording modes of each channel.

Remote Setup: (Menu settings - Same as DVR)

Display

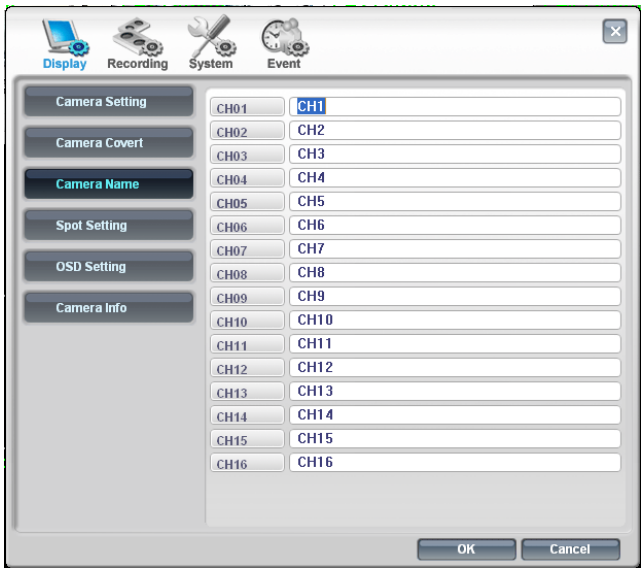
– Camera Setting

Within this setting the Hue, Saturation, Contrast and Brightness can be adjusted on a camera by camera basis.

– Camera Covert

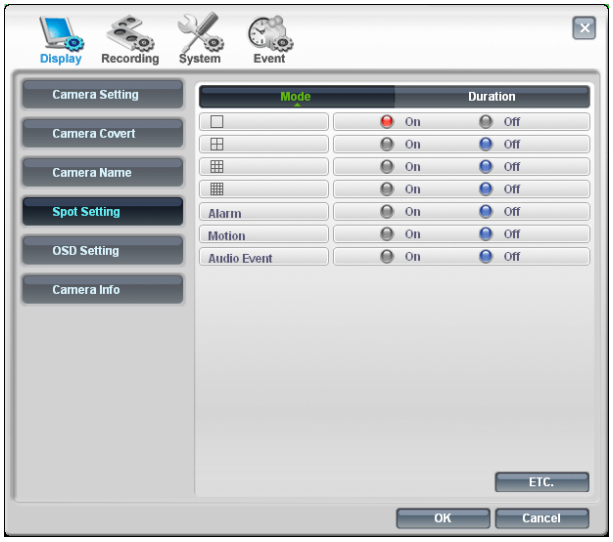
Cameras can be remotely set into Covert Mode, they are still being recorded but cannot be viewed local to the system, or by any remote user apart from the Administrator on line.

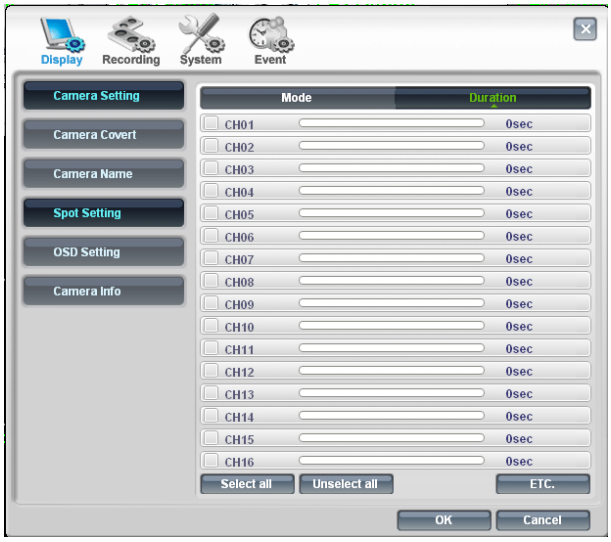
- Camera Name



Up to 32 Characters are available for each camera name.

- Spot Monitor settings

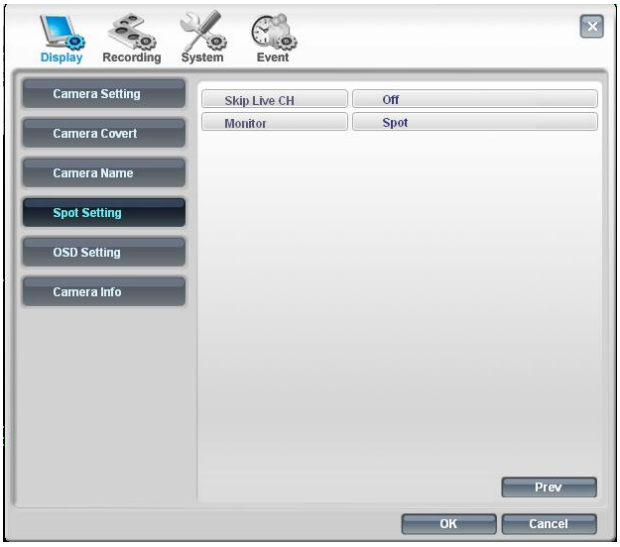




1) Set “Mode” (Split screen/ Alarm Motion or Event), by click the ON button for the required state – It will turn red.
2) Next select Duration for a sequence using the white time bar, next click OK.

Spot Monitor settings Etc

3) Clicking on the Etc.button will display the following menu



Skip Live channel – If this is set to ON, any PTZ camera being controlled will be removed from the Spot monitor sequence.

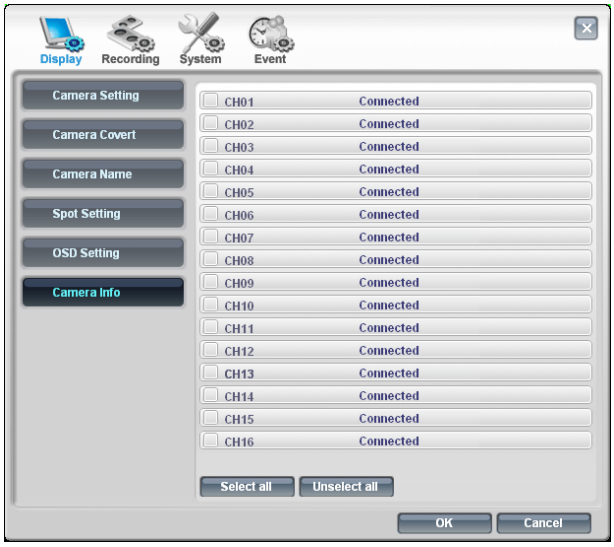
Monitor – This allows to operator to select the monitor output the will display any alarm events.

OSD On/Off

The Symbols and text displayed on screen can be controlled:

1. The status bar can be set to off/ Always on or be on for 5 or 10 seconds after a key press.
2. The Play back bar can be set to off/ Always on or be on for 5 or 10 seconds after a key press.
3. In multi screen the PTZ channel indicator can be displayed or not.
4. In multi screen the Audio channel indicator can be displayed or not.
5. The Event indicator can be displayed or not.
6. The camera title can be displayed or not.
7. The PTZ indicator can be displayed or not.
8. The PTZ function can be set to time out after a pre set time
9. In PTZ Mode, there is the option to select which interfaces can control telemetry, e.g. From Client or front panel can be disabled. (Note: control is always available from remote keyboard.
10. Menu display ca be set to time out.
11. Password entry can be set to time out.
12. Blending – the opacity of the OSD can be set
13. The Hard disk duration calculator can be displayed.

Camera Info



Cameras can be set to Connected or disconnected. If disconnected, that input can not have any recording resource allocated and will not show in any sequence etc.

Recording

Global

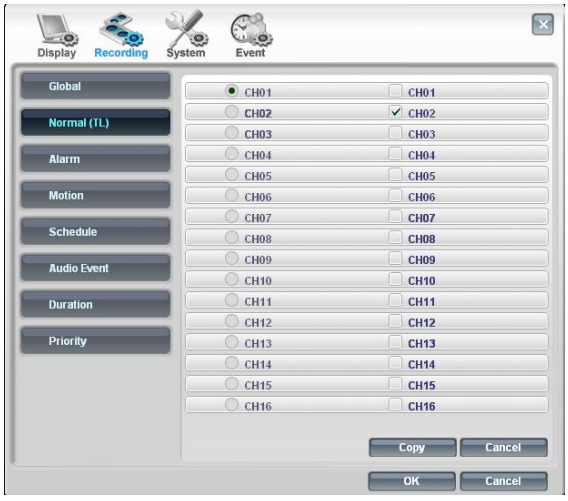
1. Watermark – security tagging of recorded video.
2. HDD Overwrite – When the disk is full it will overwrite the oldest data.
3. The Picture quality can be set
4. Alarm mode can be set between Exclusive and Normal
5. Non- Alarmed resolution – this is the resolution that non alarmed cameras are recorded in during an alarm event
6. Non-Alarmed FPS- this is the rate that non alarmed cameras are recorded in during an alarm event
7. Post-Alarm duration – the period alarm record settings continue for after an event finishes.
8. Pre-Alarm Resolution – Picture quality for pre event recording.
9. Pre-Alarm FPS – Picture rate for pre event recording.
10. Pre-Alarm Duration – Length of pre event.
11. Method – CBR (Constant Bit Rate)
    VBR (Variable Bit Rate)

Normal

Resolution

Each camera can individually have its Resolution, Record rate and whether Audio is active set from this screen.

Once a single camera has it's parameters set, it is possible to copy these to all or any other camera, as shown below



Rate

Audio

Using the Copy Cam button all settings can be copied to all or any cameras.

Alarm

The Alarm settings for Resolution, Rate and Audio are configured in the same manner as Normal (Time lapse) see page 95.

Motion

The Motion settings for Resolution, Rate and Audio are configured in the same manner as Normal (Time lapse) see page 95.

The only additions are the setting up of Sensitivity and the motion detection grid per camera.

Motion Sensitivity

The sensitivity of motion detection can be set on a per camera basis, the sensitivity will have to be adjusted to suit the individual scenes and may require several adjustments to achieve optimum performance.

The detection region setup screen is displayed by clicking the Region button.

Region

Each cameras motion detection grid can be individually tailored for the camera scene. They are set to a default of all on (Yellow).

They can all be turned off by clicking “Unselect all”. Then individually selecting the required boxes or clicking and dragging over an area.

Once set click OK.

Schedule

The Schedule settings for Resolution, Rate and Audio are configured in the same manner as Normal (Time lapse) see page 95.

The only addition is the setting up of Schedule grid, click on the SET button to display the following screen..

A timetable can be set in hourly blocks throughout the whole week.

Audio Event

The Quantum Plus can start recording when it detects an Audio event.

The Schedule settings for Resolution, Rate and Audio are configured in the same manner as Normal (Time lapse) see page 95.

The only difference is to setup the sensitivity of the audio.

Duration

The duration setting allows the user to choose the Resolution and length of time the unit records for, then the DVR will automatically adjust the rate at which it records to achieve this time period.

- Resolution

First select the resolution required for each camera.

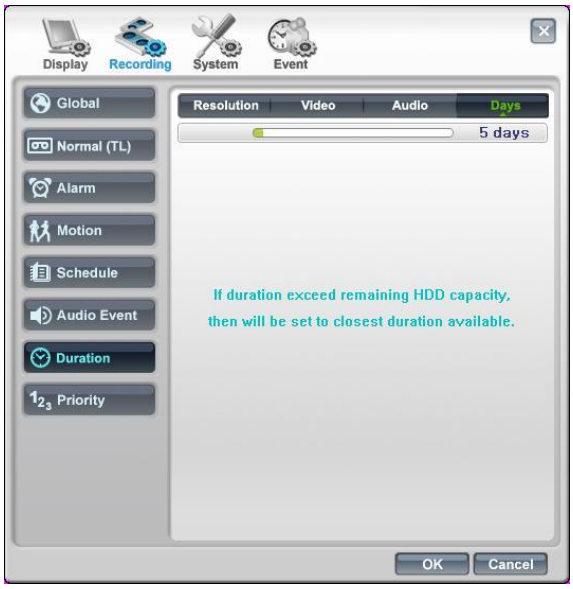
- Video

Next select whether the camera is connected to the DVR.

- Audio

Next select if Audio is being recorded on that channel.

- Days



Finally select the number of days the DVR should record for. The choice is between; 5, 10,20,30,40,50,60,70 80 or 90 Days.

Priority

The RECORD PRIORITY allows the mixing of the various record methods to customise the individual site requirements.

Example: A site may require Alarm recording at night, then a standard FPS recording during the day. In this case the Schedule would be set for required FPS and resolution, and the timetable set for this recording between 8am and 8pm each day. Schedule would be set as 1st Priority. The Alarm settings would be configured as required and this would be set as the 2nd priority.

The Quantum would then record between 8am and 8pm at the Scheduled rate, then once beyond 8pm would look to the second priority and only record Alarm Events.

System

Basic

This section is used to select:
Language
Date format
Video type
IR Remote ID
Live viewing resolution – over the network
Live Quality – over the network
Band width throttle

Account

The Quantum Plus allows for :
1 Administrator level log on
1 Manger level log on
4 User level log on

Each of the 6 log-on accounts can be given individual passwords and user rights

To amend the Name and password, click on the name beside the Client Account box. This will display the name in the ID box and it can be edited and passwords changed and confirmed.

User rights can be applied.

Select the Live CH button to select which cameras can be viewed by the user.

Auto Log out

After a certain amount of time (15mins, 30mins or 1 hour) of inactivity. The users can be automatically logged off both the Local front panel control, and the Client viewer,

Archive Log password

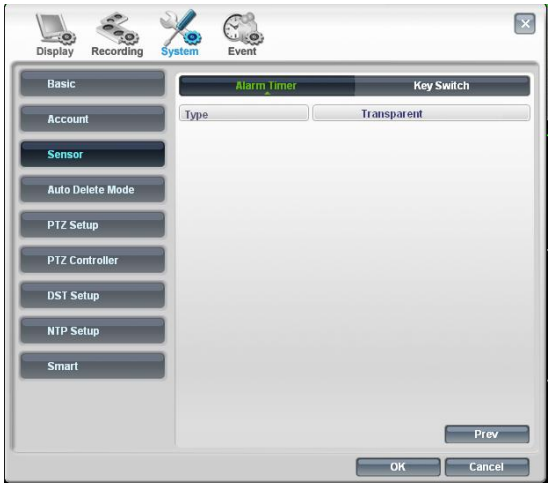
A password is required in order to access the Archive Log,

Sensor

Each of the 16 alarm inputs can be configured to be either inactive (NONE), or Normally Open (N.O), or Normally Closed (N.C).

Click on the Etc button to gain access to the set up of Keyswitch and Alarm timer.

Alarm timer

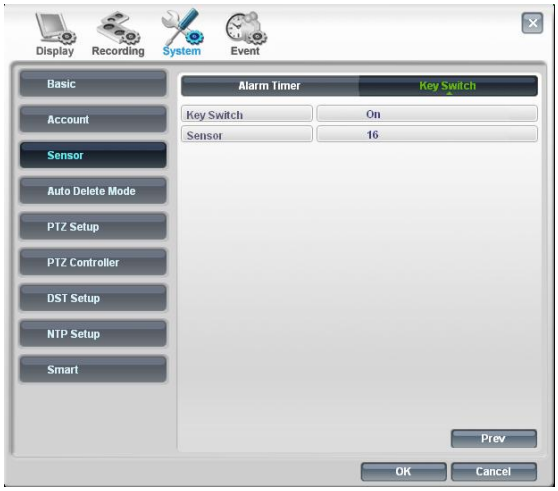


Transparent – The alarm is active for the period of the sensor change of state

Timed out – The alarm is active for a set period after the sensor has return to is normal state.

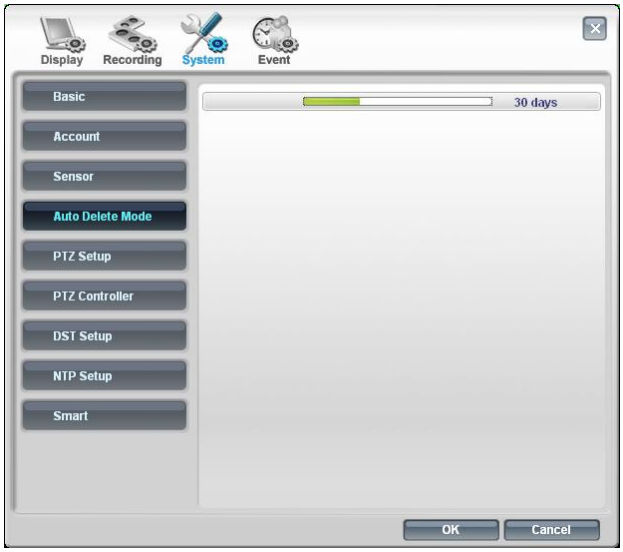
Acknowledge – The Alarm is active till the operator acknowledges it by pressing the alarm key on the VKBD4 keyboard

Keyswitch



If the Keyswitch option is switched to ON, then one of the 16 sensor inputs can be used to set and un set the alarm functions.

Auto Delete Mode



In Auto Delete Mode the DVR can be set to delete recordings that are a certain numbers of days old.

This allows the DVR to comply with data protection laws in certain countries such as France.

PTZ Setup for Cameras

- ID

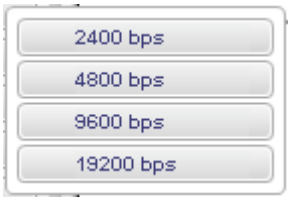
Each camera input can be allocated an RS485 ID between 1 and 255.

- Protocol

Each camera output can have an individual protocol associated with it, the choices are:

- Baud Rate

The Baud rate of each PTZ camera can be set the choices are:



PTZ set up for Keyboard

- ID

Each Keyboard can be allocated an RS485 ID between 1 and 255.

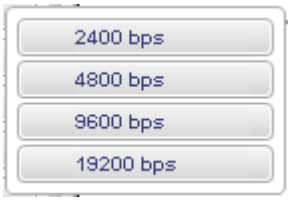
Vista VKBD3im addressing switches are inside the keyboard, refer to keyboard manual for setting address.

- Protocol

Each keyboard can have an RS485 protocol associated with it, The Default Vista keyboard is VKBD

- Baud rate

The Baud rate of each PTZ camera can be set the choices are:



Choose 9600 for the VKDB3im

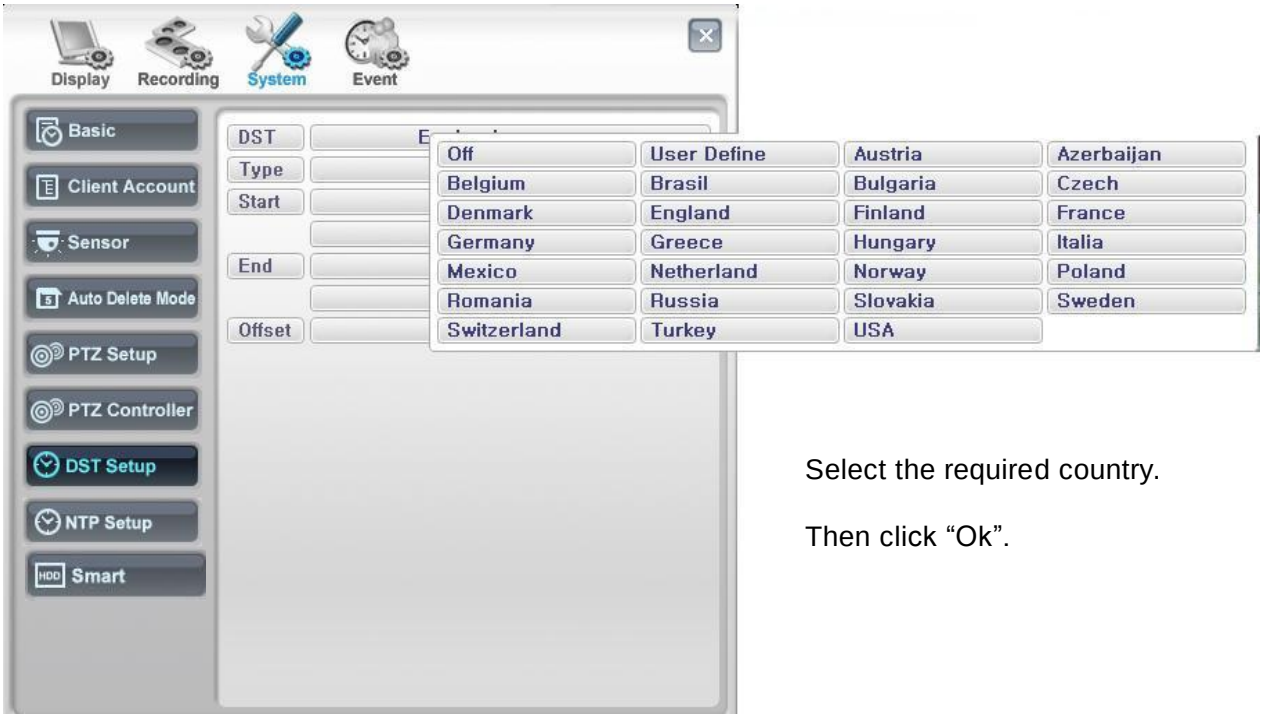
DST Setup (Day Light Saving Time)

The Quantum can be set to automatically reset its clock when the clocks change for Day Light Saving time. As default this is set to Off.

USER Define

Change “Off” to User Define, this will allow the exact date and time for the change to occur. Alternatively

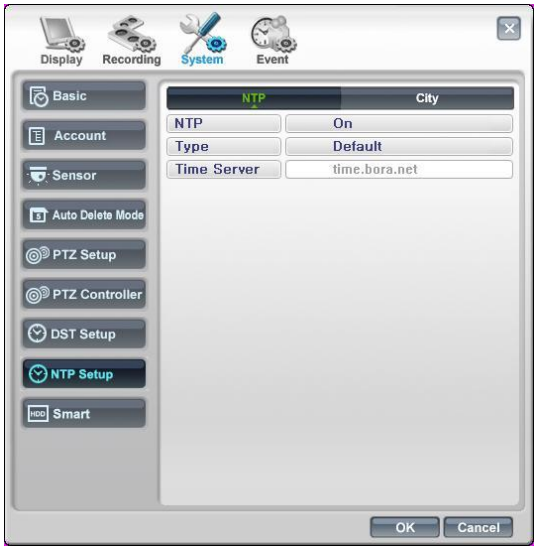
Select Region



Select the required country.

Then click “Ok”.

NTP Setup



NTP setup allows the DVR to have its internal clock synchronised with an External clock.

The default setting is “Off”

To set up hover on the “Off” a drop down arrow will appear giving the option to turn “On”.

Once “On”, two other options will appear:

Type allows selection between:

Default – Time server is “time.bora.net”.
Domain – Where another time server name can be added.
IP – Where an IP address for a time server can be input.

Select City

Once the NTP settings have been set, you must then tell the DVR which time zone you are in. This will allow it to offset any time differences if the time server you contact is in a different zone.

Select City, the map screen will appear. Hover over the city selection box, a drop down arrow will appear, click on the arrow. A list of time zones will be displayed. Select the time zone where the Quantum is located.

Then click OK.

Smart (HDD Watch Dog)

The Smart function allows the health of the Hard disk Drives to be monitored for bad sectors and high temperatures.

Note: Over time all Hard drives will develop bad sectors, this does not mean they have failed, it is an indication that they are beginning to fail, this can be used as a preventative maintenance tool, so drives can be swapped out before failing completely, so preventing the loss of recorded images.

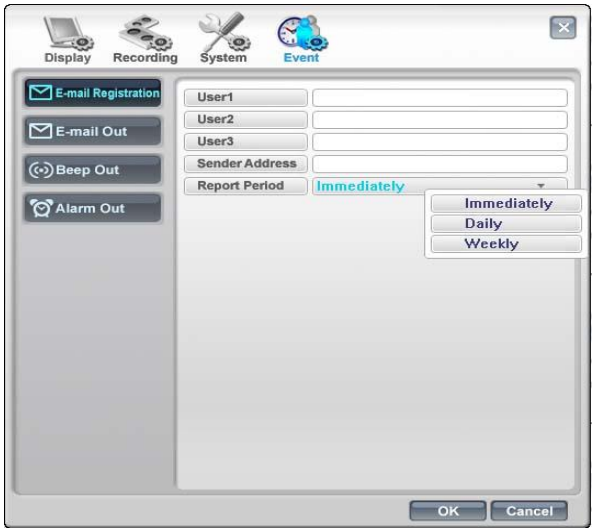
Smart can be turned on or off to monitor the Disk sectors

The temperature can be set to a value, above which it will alarm. The Q Plus is rated to work up to +50 degrees C. It is recommended to set the Temp to approx +45 degrees. This will give the opportunity to take preventative action, such as improving ventilation to the unit.

Message can be turned On or Off, if On a message will appear on the screen to warn of potential problems.

Event

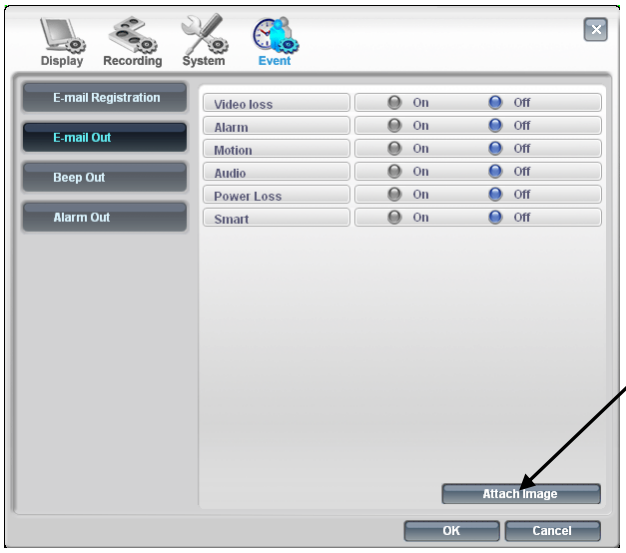
Email Registration



The Quantum Plus will send E-mails to up to 3 defined addresses under certain conditions such as Alarms or video loss. The screen is where you setup the receiving address and address that the DVR will send from.

The mails can be set to be sent immediately an event occurs, Daily or Weekly.

Email Out



The actions which cause an e-mail response can be defined within this screen.

Select the Attach image button to select which cameras image should be sent with the e-mail

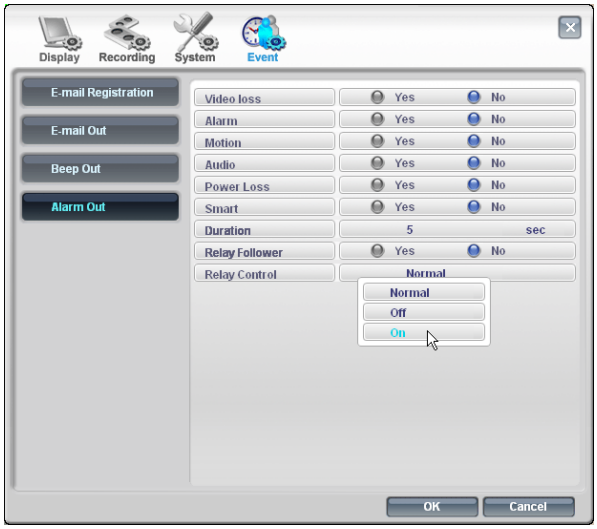
Beep Out

The internal buzzer can be set to sound on the following occurrences:

Video Loss
Alarm activation
Motion Detection
Power loss

The duration of the buzzer can be set.

Alarm Out



The Alarm output relay can be set to activate on the following occurrences:

Video Loss
Alarm activation
Motion Detection
Power loss
Smart – Disk test

The duration of the relay closure can be set.

If the relay follower is set to yes, each time a camera is selected a relay out put on the rear of the DVR will close. This can be used as the alarm input to a switcher to allow the monitor outputs of multiple DVR's to be switched to a single monitor.

Relay control – if set to Yes then the relay can be remotely toggled via the relay control icon on the client software.

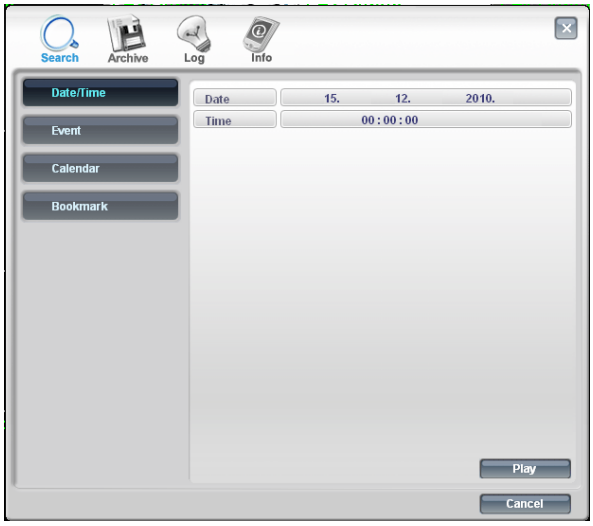
Local Search (viewing downloaded footage)

This allows playback of video which has been downloaded top the PC.

Search

Searches can be done by Date/Time, Events, Calendar or Bookmarks

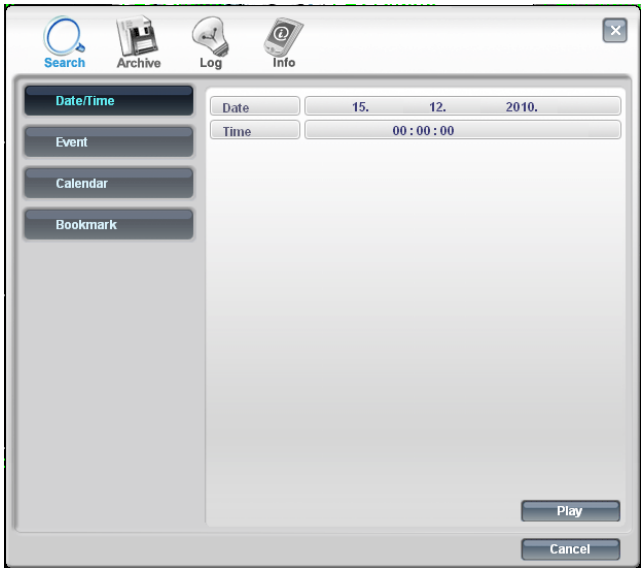
Date/Time



Hovering over the Date and Time bars will allow drop down boxes to select the required time and Date.

Once set, click Play.

Event



Choose the Event search box then choose the type of Event you are searching for, options are: Alarms, Motion or Audio.

Once the selection is made, a list will appear, choose the Event required and click Play.

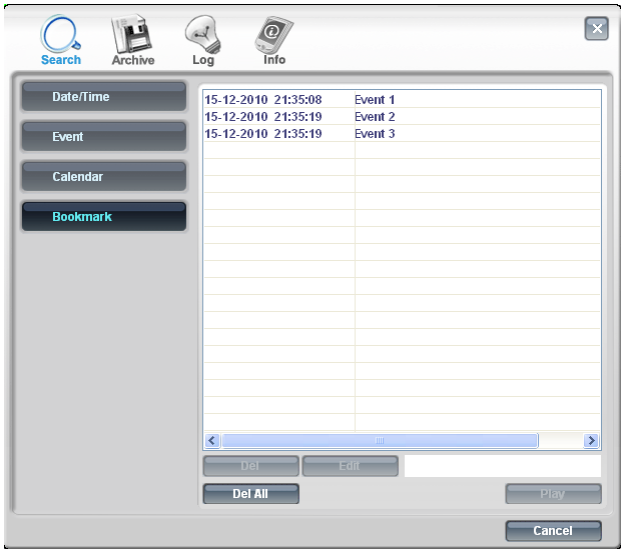
Calendar

When the Calendar option is chosen this screen will appear, any day with recording available will be highlighted in Blue.

Select the required day.

Any downloaded events will be shown, click on the event, the red line will move to that event. Then click Play to review the recording.

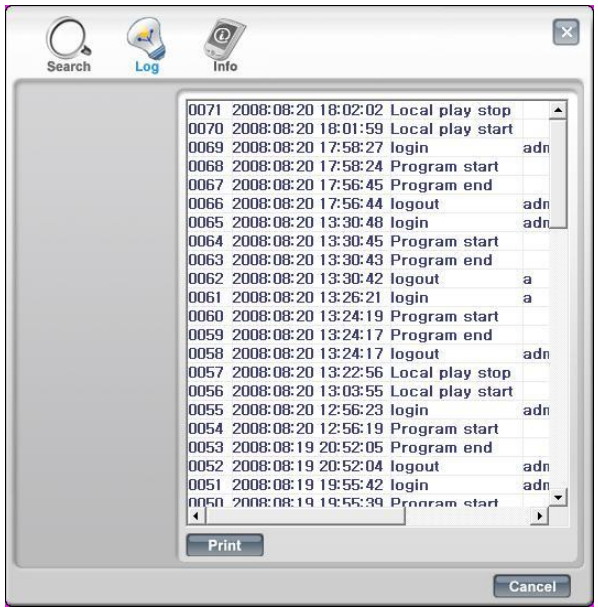
Bookmark



If Bookmarks have been set, selecting a the Bookmark tab, will display a list of Bookmarked sections,

Select a particular section and click on Play

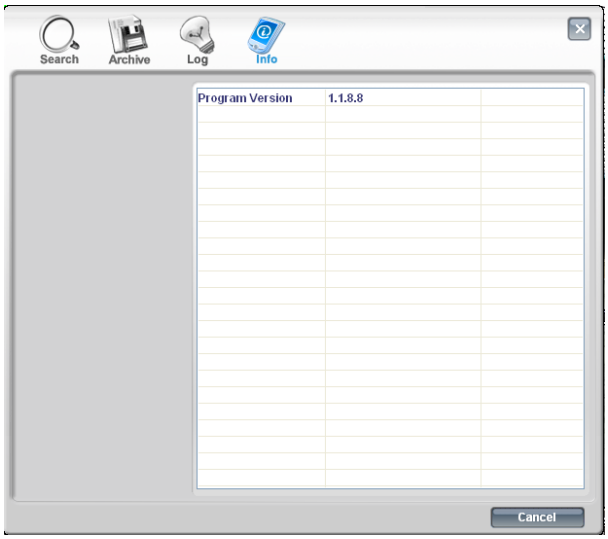
Log



Clicking on Log will display the log file from the unit.

This file can be printed, by clicking Print.

Info



Click on Info. This will display the version of the software client being used.

Local Setup

This allows the setup of the viewing of the software on the PC.

Global

This screen allows the following:

Draw mode to be set to YUV or RGB

Date Format to be set to: DD/MM/YYY, MM/DD/YYYY or YYYY/MM/DD.

Save Format, for the saving of stills as either JPEG, Bit Map or TIF.

Clock settings of 24 or 12 hour display

Watermarking of recorder video

Location for where stills are saved.

Opacity

The opacity or “boldness” of the OSD can be individually set per function. The lower the number the more see through the box.

Audio Buffer

For future use.

PAN, TILT, Zoom, Focus (Remote telemetry control)

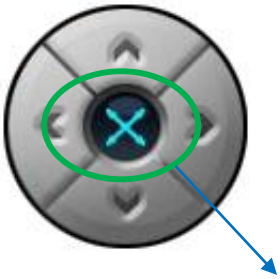
When PTZ button is being pressed, PTZ control icon will be pop-up on the live image.

PAN/TILT/ZOOM/FOCUS

When PAN/TILT button is clicked the Pan/Tilt control appears, this allows Left, Right, Up and Down Control of PTZ cameras

When Zoom/Focus button is clicked, the control changes to Zoom in on the up arrow, Zoom out on the down arrow. Focus near on the left button and focus far on the right arrow.

PRESET/LEARN



PRESET&LEARN icon

The presets button can be activated by clicking on the centre of the control icon, the preset symbol will appear and the Preset selection box will appear.

To save a preset, move the camera to the desired position then click “Set” followed by the desired number.

To recall the preset, click “Call” followed by the desired number.

Quit (Exiting Client program)

To exit the Client viewer program click the Quit button.

APPENDIX 1

ALARM SENSOR INSTALLATION

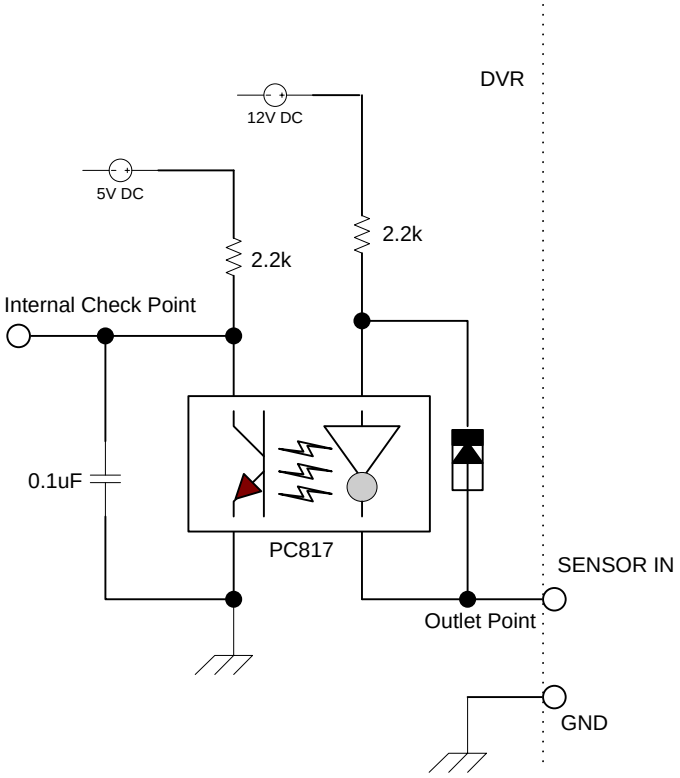
1. Components

1) External Sensor: 1

2) DVR System: 1

2. Inner Circuit for Sensor Input

The inner circuit of Quantum DVR is as follows,



① PC817 : Photo Coupler

② The Specification of PC817

■ Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Input	Forward current	IF	50	mA
	*1Peak forward current	I FM	1	A
	Reverse voltage	V R	6	V
	Power dissipation	P	70	mW
Output	Collector-emitter voltage	V CEO	35	V
	Emitter-collector voltage	V ECO	6	V
	Collector current	IC	50	mA
	Collector power dissipation	P C	150	mW
Total power dissipation		P tot	200	mW
*2Isolation voltage		V iso	5 000	V rms
Operating temperature		T opr	-30 to + 100	°C
Storage temperature		T stg	-55 to + 125	°C
*3Soldering temperature		T sol	260	°C

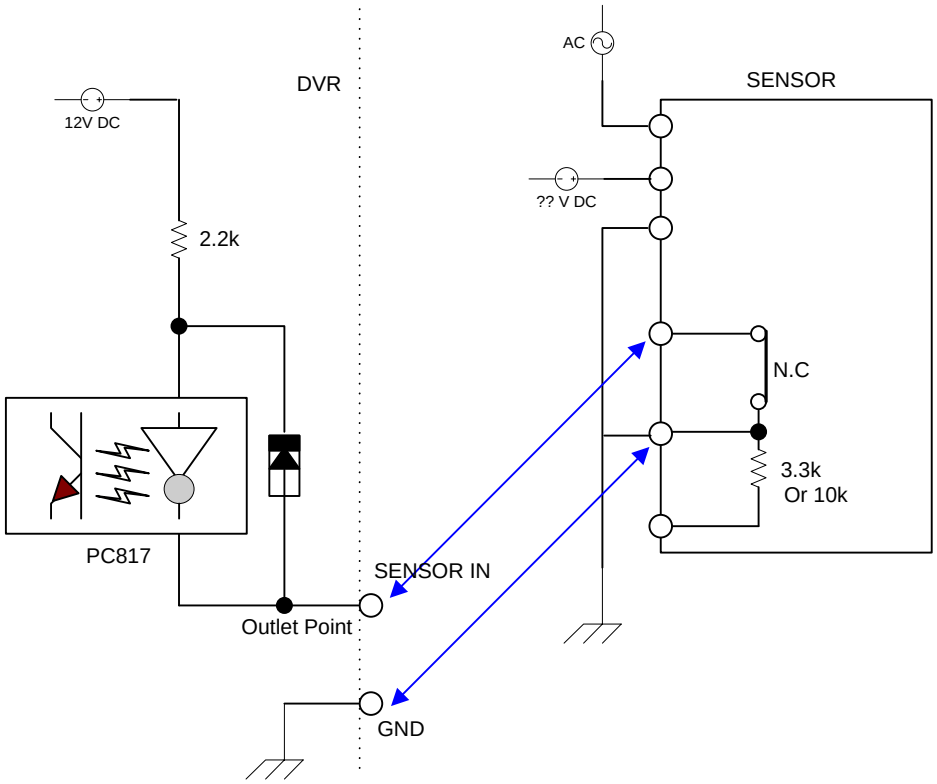
*1 Pulse width<=100□s, Duty ratio : 0.001
*2 40 to 60% RH, AC for 1 minute
*3 For 10 seconds

■ Electro-optical Characteristics

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		V F	IF = 20mA	-	1.2	1.4	V
	Peak forward voltage		V FM	IFM = 0.5A	-	-	3.0	V
	Reverse current		IR	V R =4V	-	-	10	μ A
	Terminal capacitance		Ct	V = 0, f = 1kHz	-	30	250	pF
Output	Collector dark current		ICEO	V CE = 20V	-	-	10 -7	A
Transfer charac-teristics	*4Current transfer ratio		CTR	IF = 5mA, V CE = 5V	50	-	600	%
	Collector-emitter saturation voltage		V CE(sat)	IF = 20mA, I C = 1mA	-	0.1	0.2	V
	Isolation resistance		R ISO	DC500V, 40 to 60% RH	5 x 1010	1011	-	Ω
	Floating capacitance		Cf	V = 0, f = 1MHz	-	0.6	1.0	pF
	Cut-off frequency		fc	V CE = 5V, I C = 2mA, R L = 100 W, -3dB	-	80	-	kHz
	Response time	Rise time	t r	V CE = 2V, I C = 2mA, R L = 100 Ω	-	4	18	μ s
		Fall time	tf		-	3	18	μ s

1. SENSOR Install Processing

① Please refer the below block diagram.

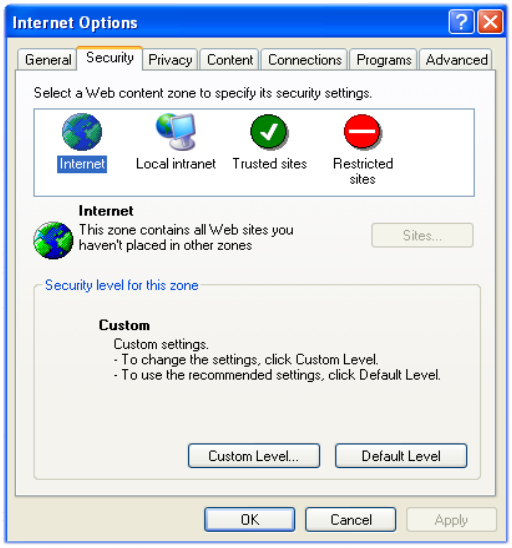


APPENDIX 2

SETTING INTERNET SECURITY SETUP FOR WEB CLIENT ON WINDOW XP/2000 & WINDOW VISTA SERVICE PACK 2.

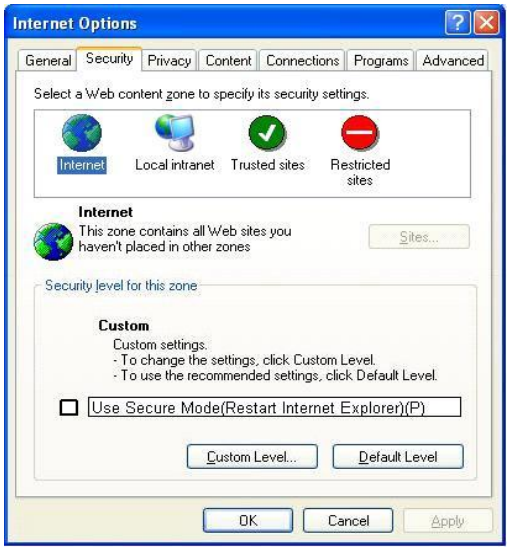
1) Security Setup

> Window XP / 2000

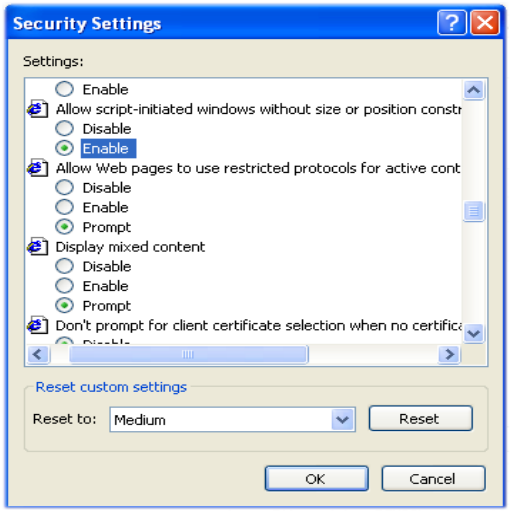


Tools-> Internet Options-> Security
-> Select “Customer Level”

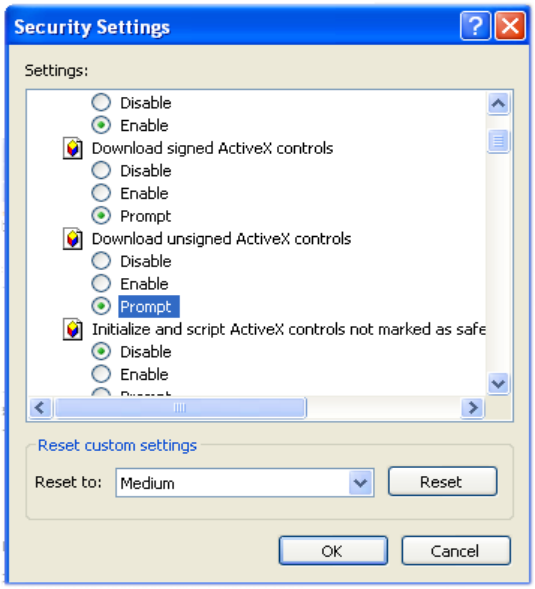
> Window Vista



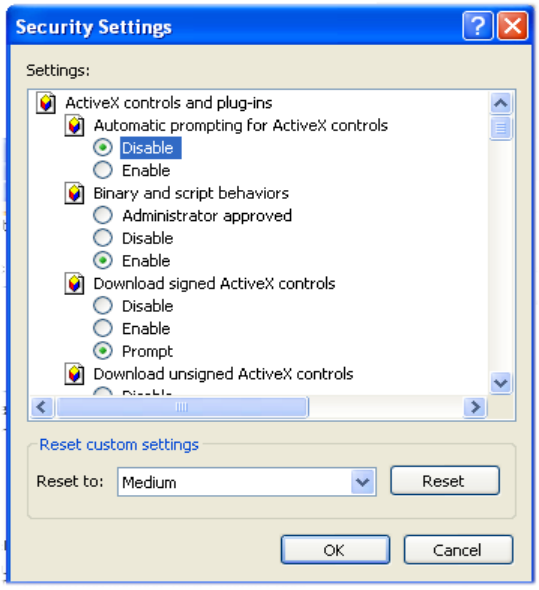
Tools-> Internet Options-> Security
-> Unselect square box ->
Select “Customer Level”



Select “ Allow script-initiated windows Without Size or position constraints”-> Enable.

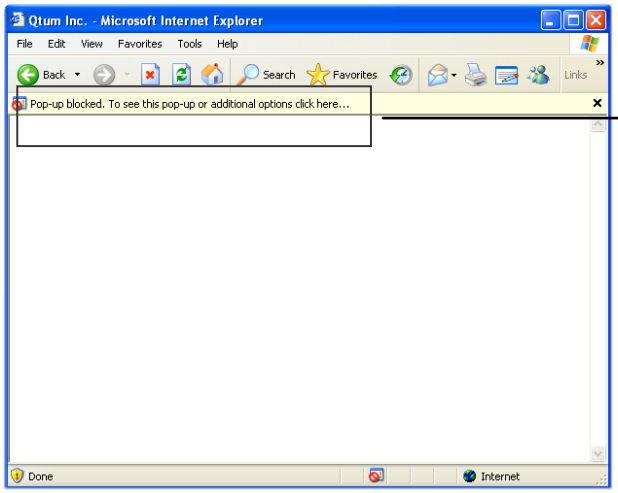


Select “Download unsigned Active X Controls”-> Prompt

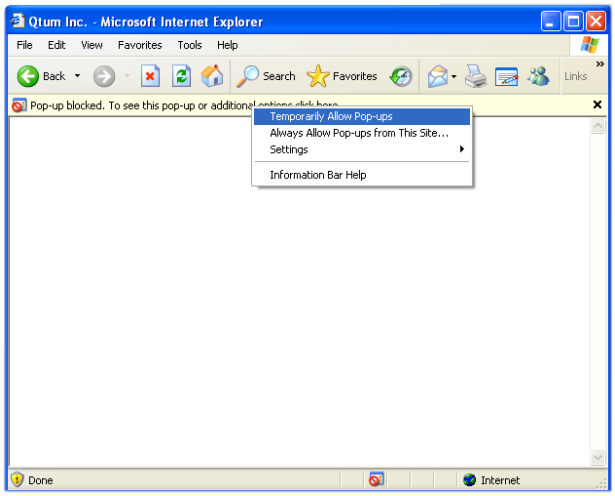


Select “ Automatic Prompting for Active X Controls”-> Disable

2) Connection


Qtum Inc. - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Links
Pop-up blocked. To see this pop-up or additional options click here...
Done
Internet

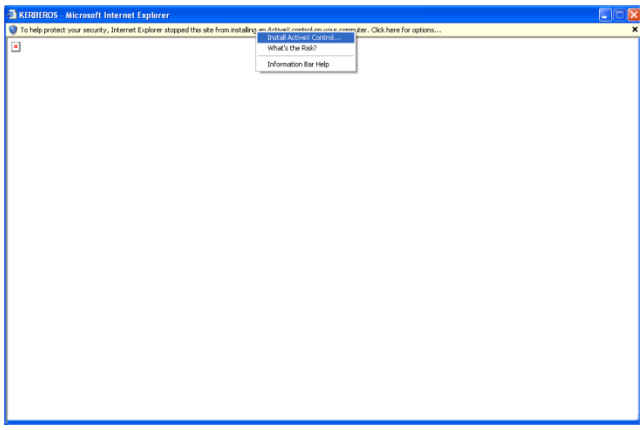
Click here as described


Qtum Inc. - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Links
Pop-up blocked. To see this pop-up or additional options click here...
Temporarily Allow Pop-ups
Always Allow Pop-ups from This Site...
Settings
Information Bar Help
Done
Internet

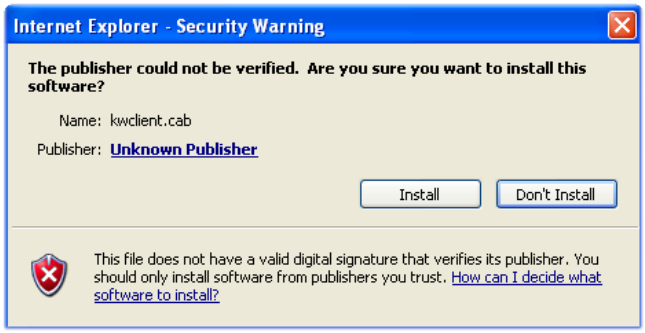
Select “Temporary Allow Pop-ups”

KERBEROS - Microsoft Internet Explorer
To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...

Click “To help protect security, Internet Explorer stopped this site from installing an Active X control on your computer. Click here for options…”


KERBEROS - Microsoft Internet Explorer
To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...
Install ActiveX Control...
What's the Risk?
Information Bar Help

Select “Install Active X Control “


Internet Explorer - Security Warning
The publisher could not be verified. Are you sure you want to install this software?
Name: kwclient.cab
Publisher: Unknown Publisher
Install
Don't Install
This file does not have a valid digital signature that verifies its publisher. You should only install software from publishers you trust. How can I decide what software to install?

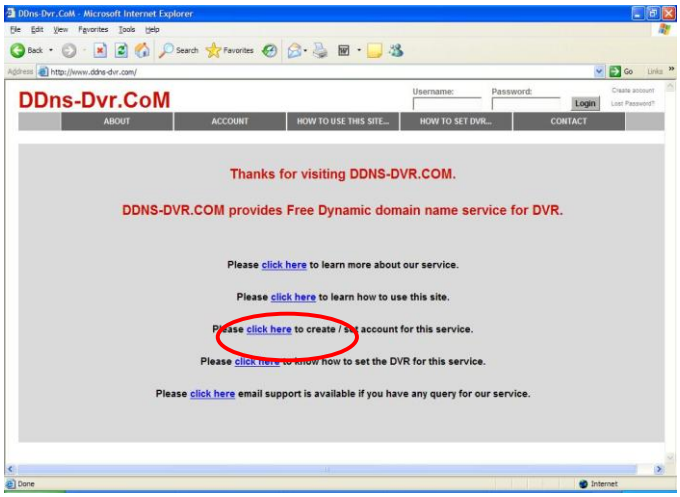
Select “Install” and then ‘Log-In’ box will be shown.

APPENDIX 3

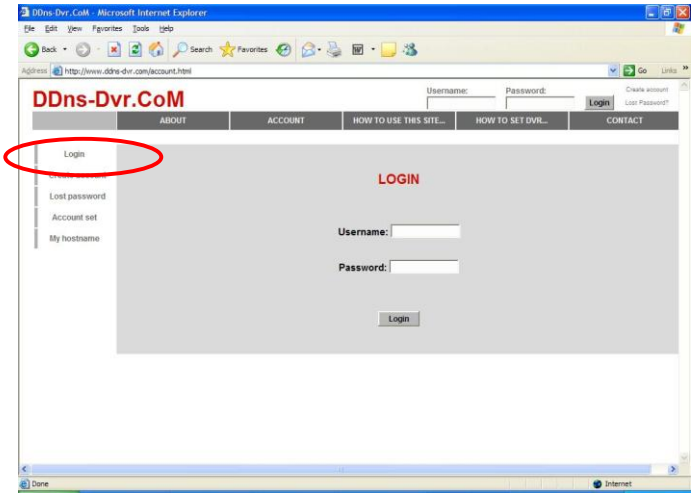
DYNAMIC IP (Supporting DDNS Server)

With DDNS Server, This allows a user to connect to the unit remotely without the need for a fixed IP address.(Please register your ID & Domain at www.ddns-dvr.com in which you can use their DDNS server as free of charge)

1. Visit www.ddns-dvr.com to get the DDNS user ID & PW as well as Host name.

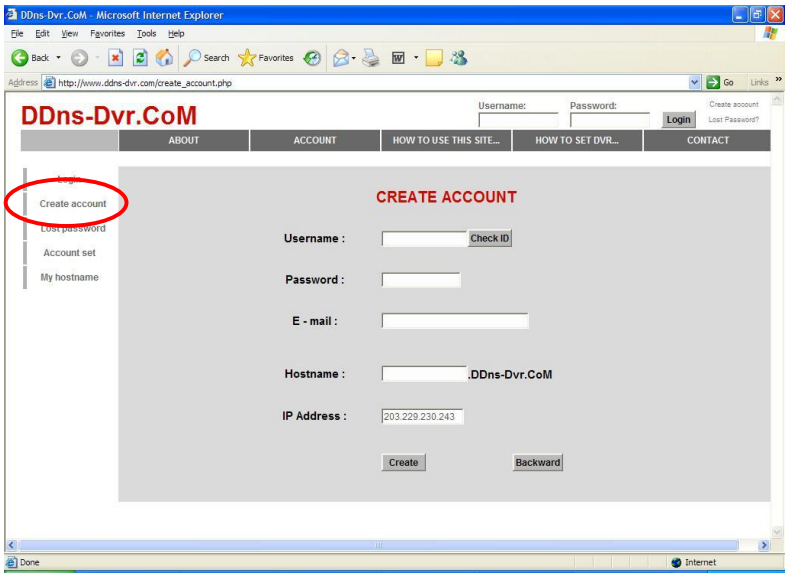

DDns-Dvr.CoM - Microsoft Internet Explorer
DDns-Dvr.CoM
Username:
Password:
Login
ABOUT
ACCOUNT
HOW TO USE THIS SITE...
HOW TO SET DVR...
CONTACT
Thanks for visiting DDNS-DVR.COM.
DDNS-DVR.COM provides Free Dynamic domain name service for DVR.
Please click here to learn more about our service.
Please click here to learn how to use this site.
Please click here to create / set account for this service.
Please click here to know how to set the DVR for this service.
Please click here email support is available if you have any query for our service.

2. Click to create / set account of “Dynamic DNS”.



3. Select “Create Account” menu.

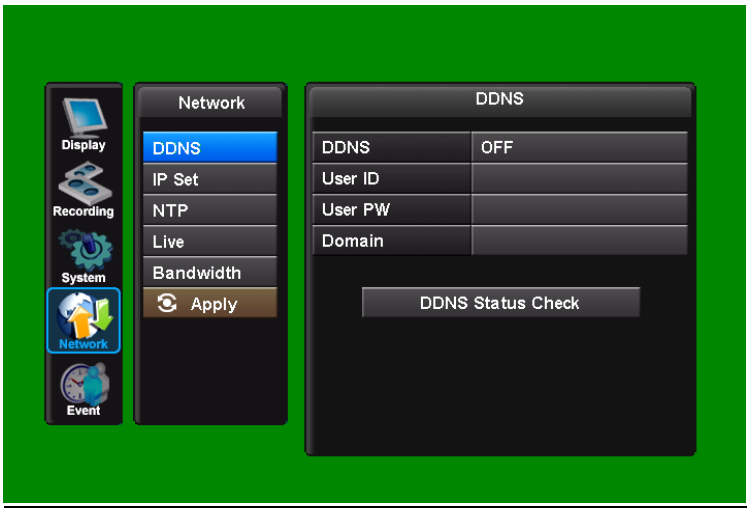
4. Create Account.



> Fill in all blanks in order to create new account.
ID & Password will be emailed to you when the account is setup correctly.

Once the DDns-Dvr account has been setup, it is necessary to add the details in the Network section of the Quantum's menus.

DDNS SET



To enter Network set menu, system ask password (Default is 00000000).

In DDNS environment, need to be changed DVR & Web server port, please refer to IP set.

Set up DDNS

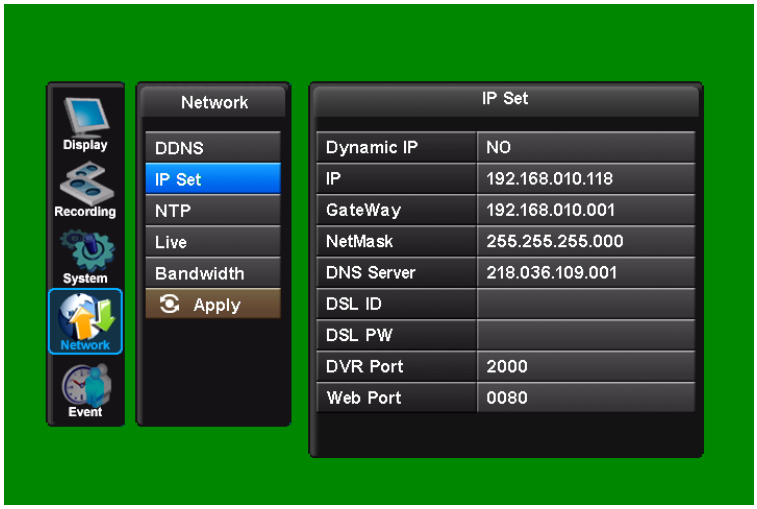
1. Change DDNS to ON
2. Input User ID
3. Input User PW
4. Input Domain
5. Click “DDNS Status Check” if it is “ok” Click “Apply”

> Note; In DDNS Setup, The Domain Name has to be filled in.

Appendix 4

SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER

(Port Forwarding)



1) To use IP sharing Router, “Use Dynamic IP” should be set to “NO”.

- DVR Port: This can be set to any number between 2000 to 65535.
- Web Server Port: this can be set to any number between 2000~65535, as long as it is not the same as the DVR Port number

2) Setup “virtual server” on IP sharing Router

It is for setting virtual server to forward IP which is allotted to DVR.

> For example,

DVR-1, IP : 192.168.10.107, DVR Port : 7000, Web Server Port : 7001

If DVR-1 is configured as above, the virtual server on IP sharing router is as follows.

1) PC Server Name : DVR-1(IP 192.168.10.107)

Protocol : TCP, Internal Port : 7000, External Port : 7000

2) PC Server Name : DVR-1 (IP 192.168.10.107)

Protocol : TCP, Internal Port : 7001, External Port : 7001

* For more detail, please refer to relevant IP sharing manual.

(3) ‘DDNS’ Setup on IP sharing router

DDNS configuration is not needed in case of fixed IP.

(4) To connect DVR-1 with Internet Explorer, http://dvr-1.ddns-dvr.com:7001,
to connect DVR-1 with CD installer, http://dvr-1.ddns-dvr.com:7000.

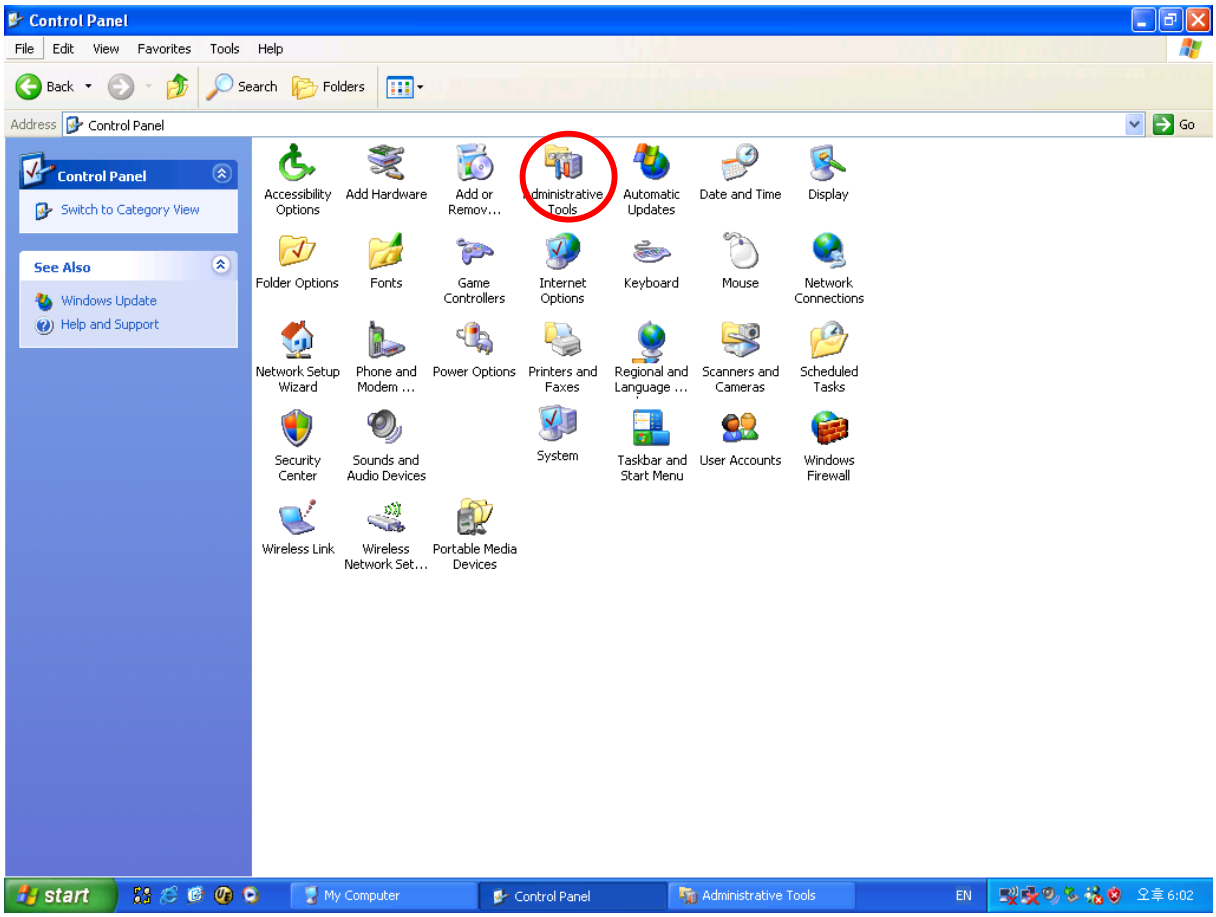
APPENDIX 5

MAKING A PARTITION ON AN EXTERNAL USB HARD DRIVE

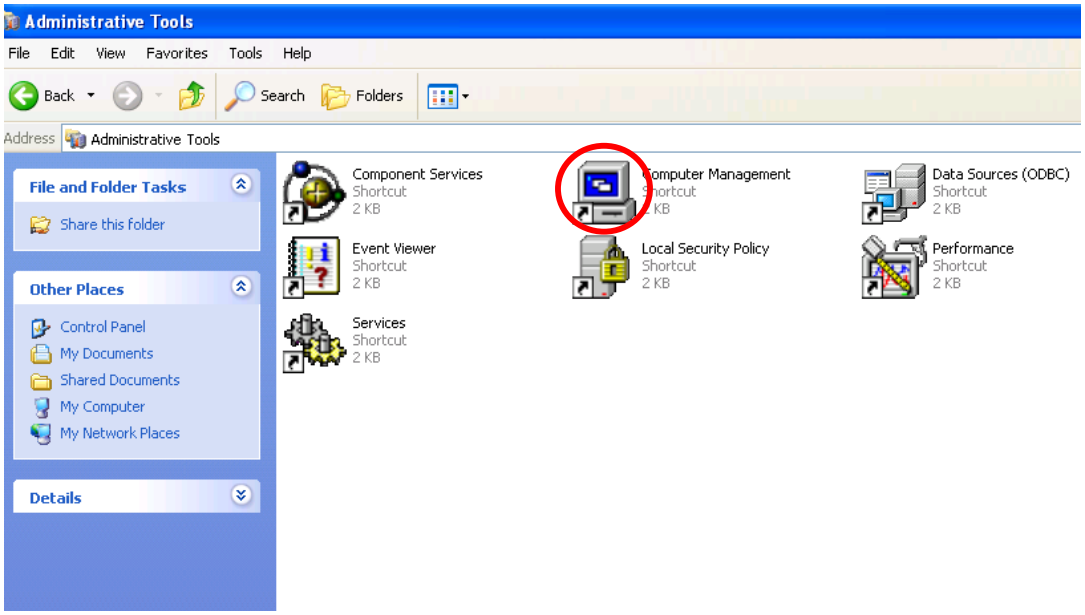
To back up to USB HDD, the USB HDD should be formatted first on PC. The Quantum PLUS supports the FAT32 & NTFS file system, of which maximum size is 500GB for one partition. Please refer to the following procedure to make a partition and format on PC.

*If the HDD capacity is under 500GB, you don't need to make a partition and simply connect to the DVR directly.

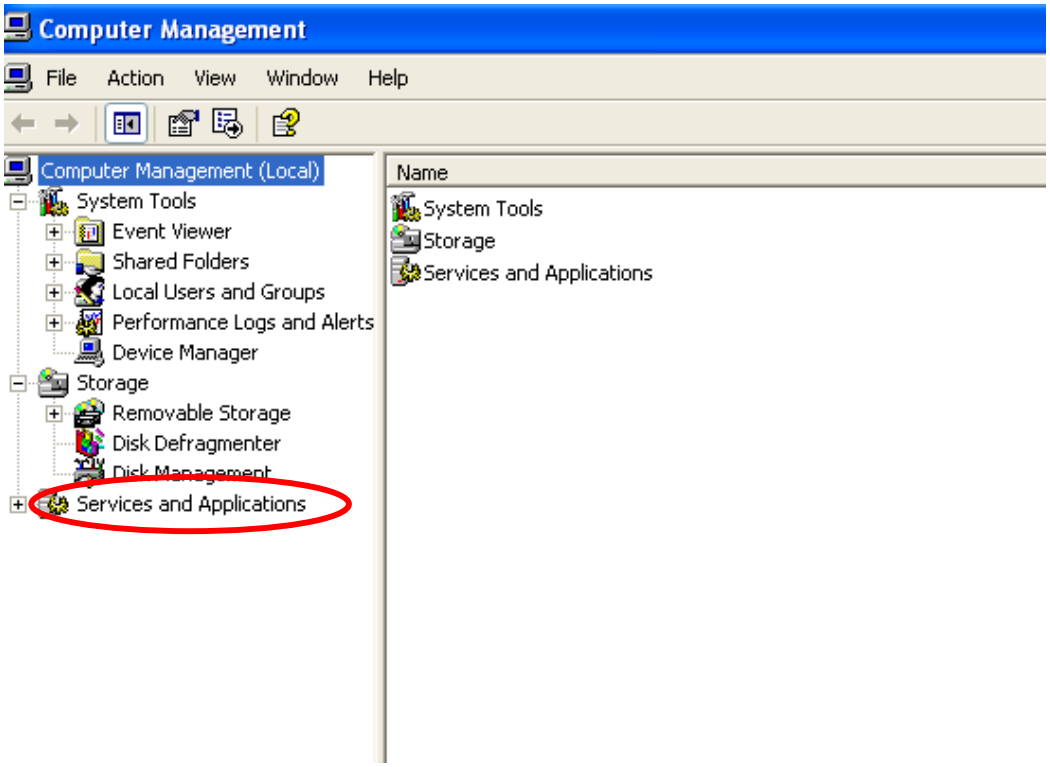
1. Select Control panel-> administrative Tools.



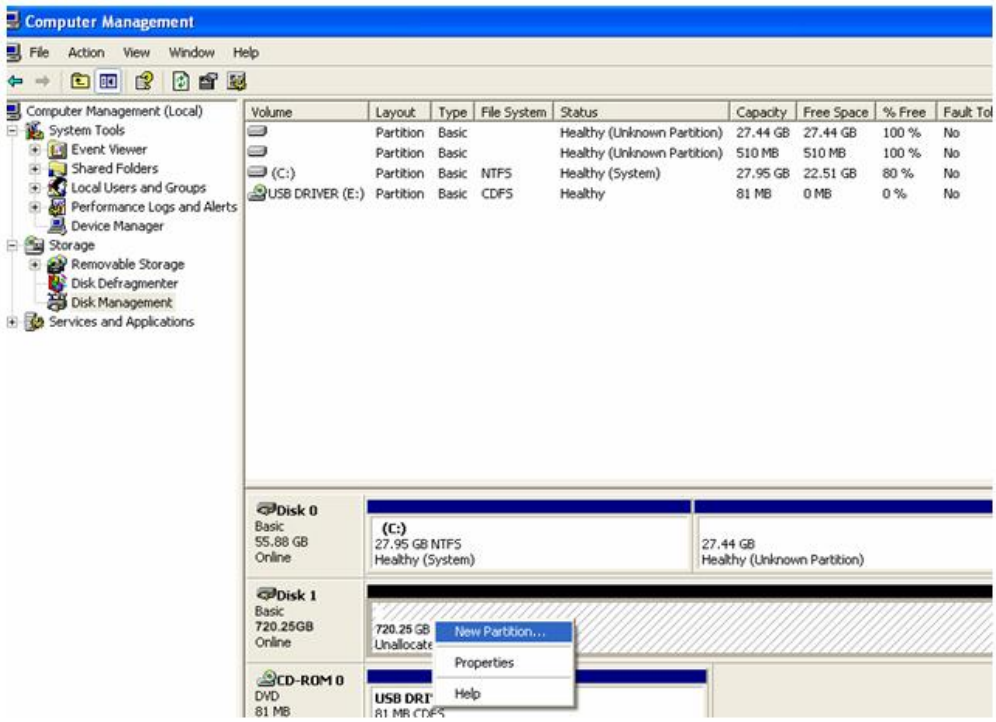
2. Select “Computer Management”



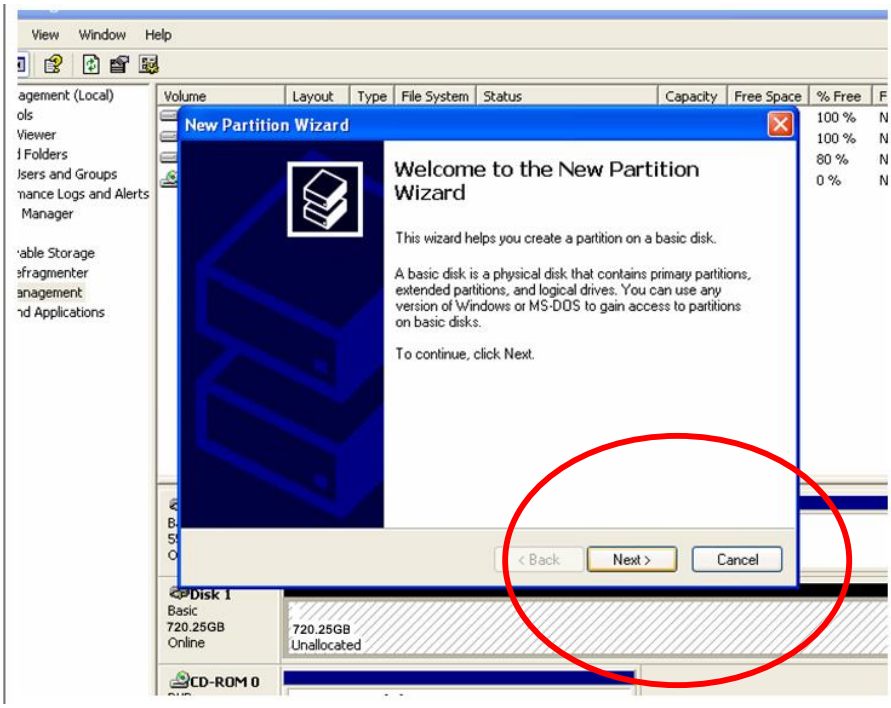
3. Select “Disk Management”.



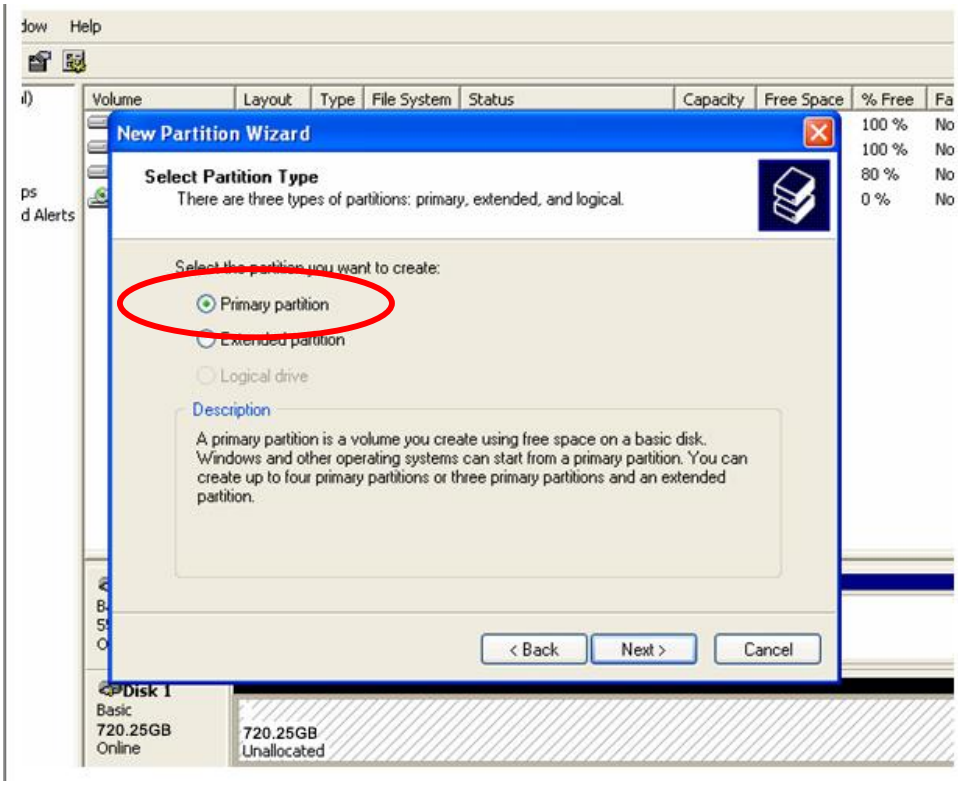
4. Click right mouse button and select “New Partition”.



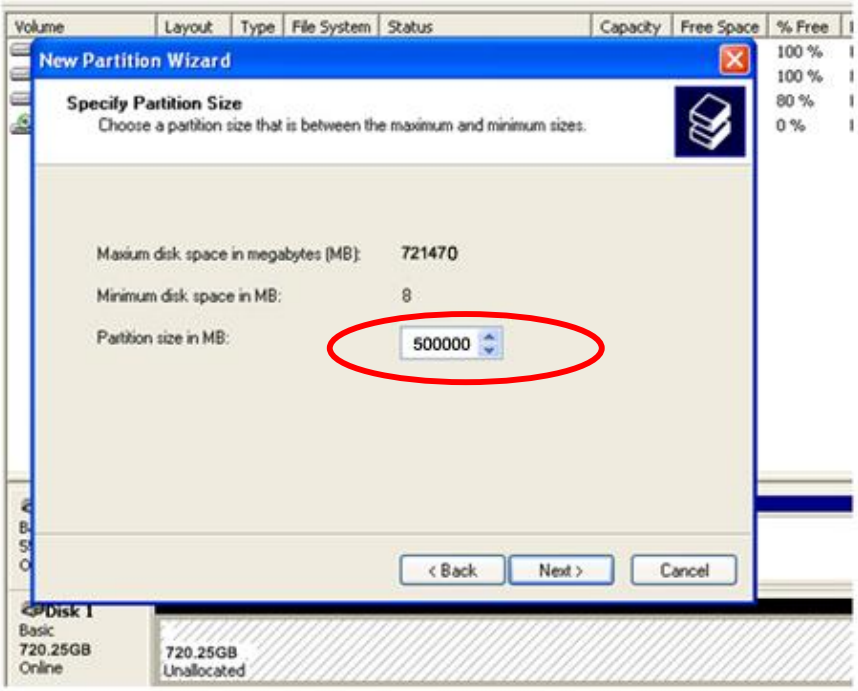
5. Follow “New Partition Wizard” procedure as below.


View Window Help
Volume Layout Type File System Status Capacity Free Space % Free
100 %
100 %
80 %
0 %
New Partition Wizard
Welcome to the New Partition Wizard
This wizard helps you create a partition on a basic disk.
A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. You can use any version of Windows or MS-DOS to gain access to partitions on basic disks.
To continue, click Next.
< Back
Next >
Cancel
Disk 1
Basic
720.25GB
Online
720.25GB
Unallocated
CD-ROM 0

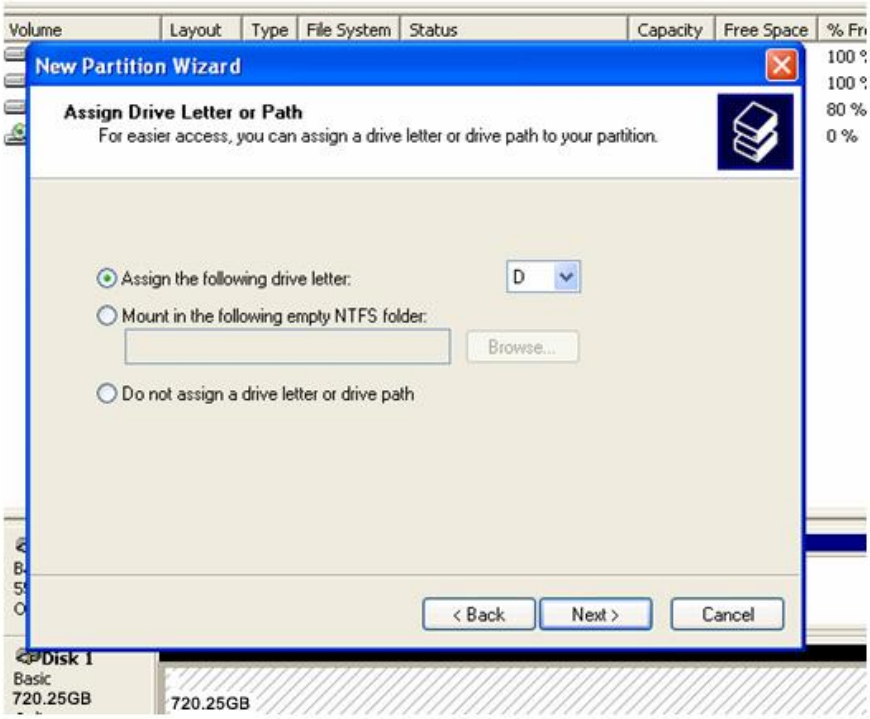
6. Select the Primary partition option.


New Partition Wizard
Select Partition Type
There are three types of partitions: primary, extended, and logical.
Select the partition you want to create:
Primary partition
Extended partition
Logical drive
Description
A primary partition is a volume you create using free space on a basic disk. Windows and other operating systems can start from a primary partition. You can create up to four primary partitions or three primary partitions and an extended partition.
< Back
Next >
Cancel
Disk 1
Basic
720.25GB
Online
720.25GB
Unallocated

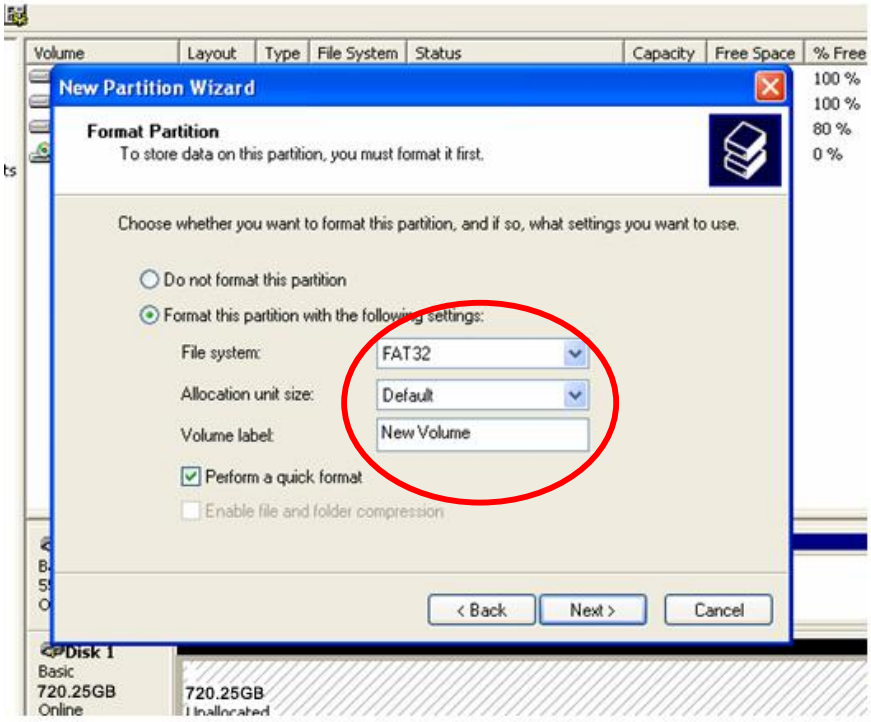
7. Maximum is 500GB at FAT32 file format.



8. Assign drive letter

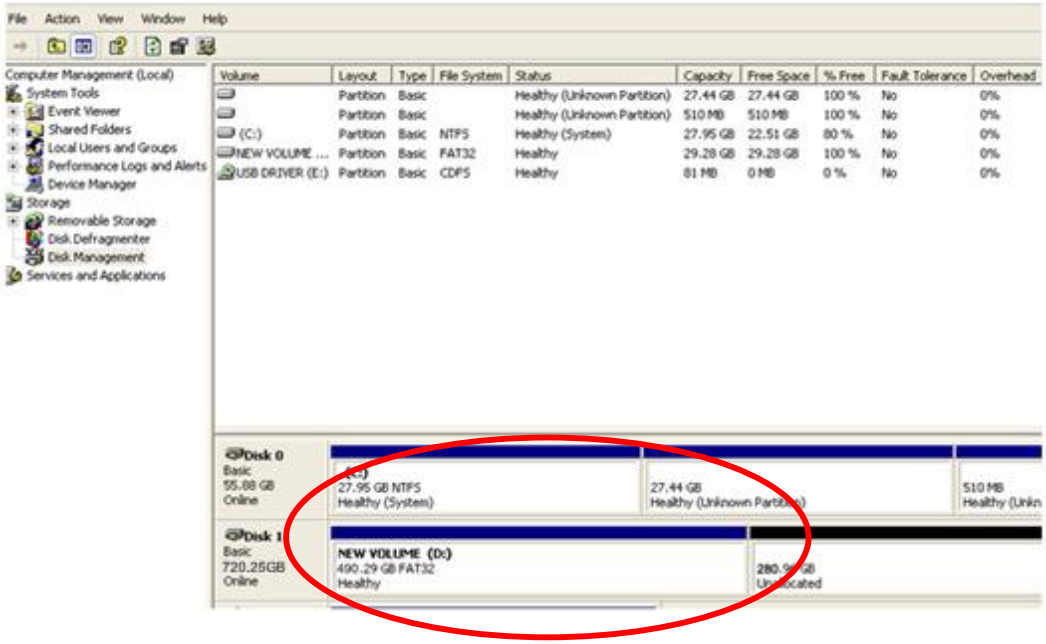


9. Format the partition to FAT32

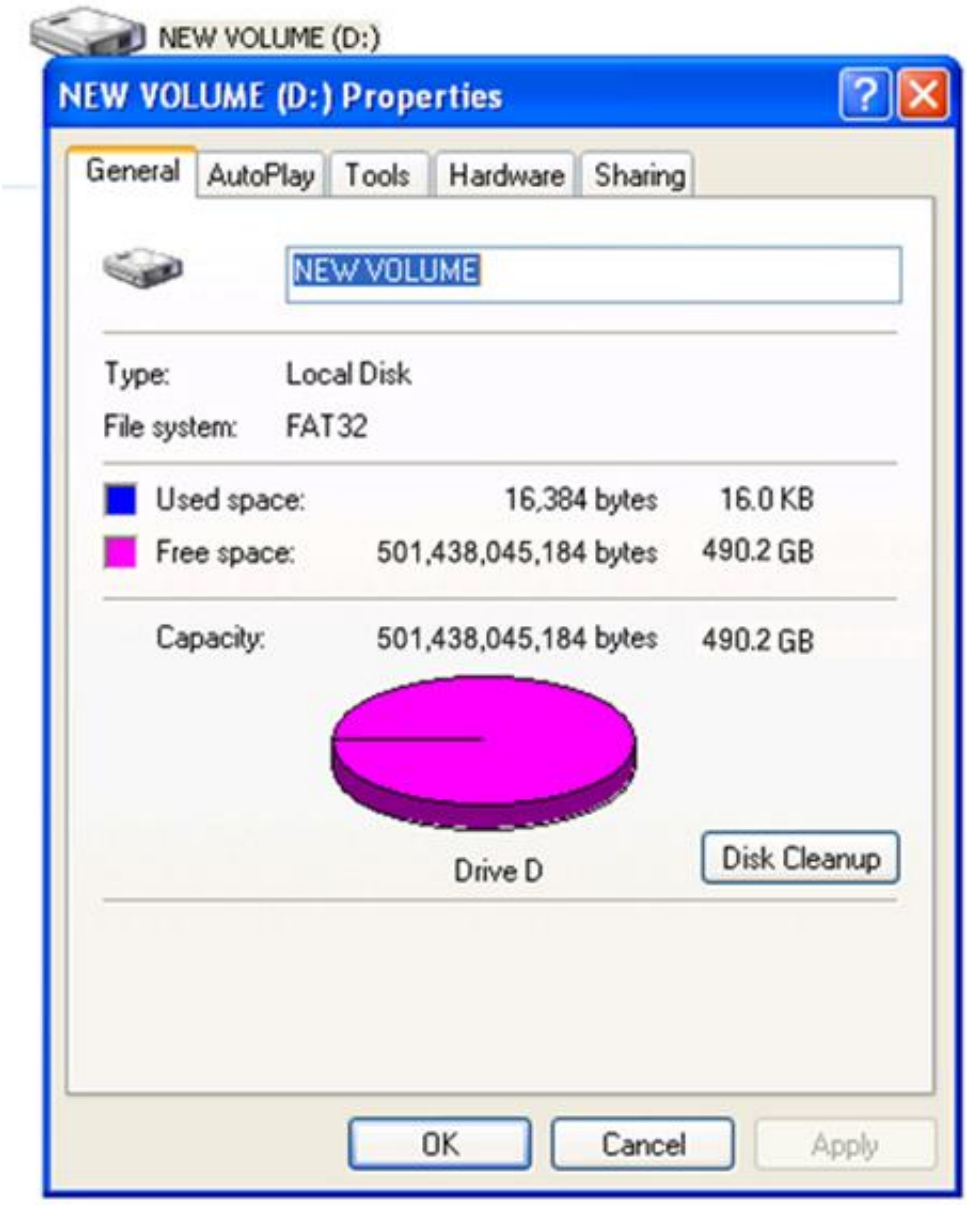


10. At this stage, New Partition has been made.

11. Check New partition was created correctly.(Format will run automatically)



12. Check New Partition was created correctly



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